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EGG & POULTRY REVIEW

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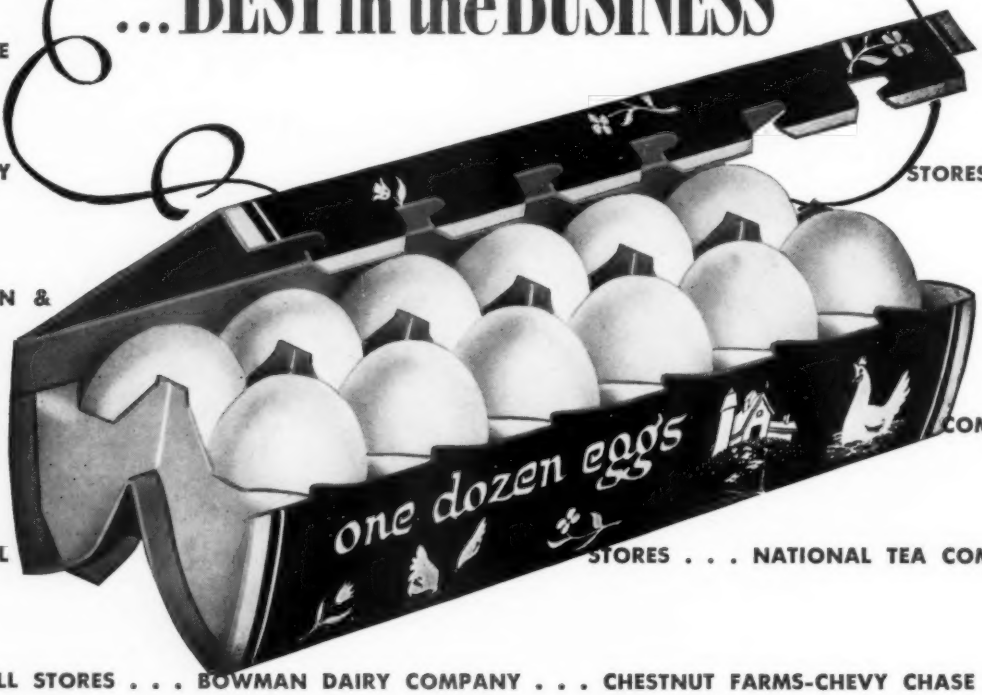

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By **NORMAN MYRICK**

Being The Tale Of How A Great Organization Tells A Great Story

A FEW WEEKS ago several hundred newspapers in the United States carried stories that explained the important contribution of milk to the prosperity of state and nation. They were good stories based on solid facts. They dealt with prosperity, a subject of interest everywhere. They were well written in clean, crisp newspaper style.

How was it that so many newspapers carried these stories? Where did they get the facts? Who called the editor's attention to the facts in the first place? The answer is the Milk Industry Foundation and its public relations program.

Ever since its creation the Milk Industry Foundation has been pitching public relations strikes over the public plate. The Foundation has a standing public relations committee. Although the personnel on the committee changes from year to year but the committee remains. Well known names in the industry were on that first P. R. group: Francis Kullman, of Bowman Dairy Company, Chicago, George Diffenback of Abbotts Dairies, Philadelphia, the late E. J. Finneran of National Dairy Products Corporation, Stuart Peabody of Bordens and Robert E. Jones, Golden State Co., San Francisco. One of the first things that the committee did was to secure the services of a good public relations director. What the Public Relations Committee and their permanent Director of Public Relations have been able to accomplish is an inspiring achievement that comes pretty close to being an epic.

The Public Relations Committee of the Milk Industry Foundation today includes the following:

A. J. Claxton of Meadow Gold Dairies, Inc., Pittsburgh, Chairman; Bryan Blalock of The Borden Company, Marshall, Tex.; C. Raymond Brock of Brock-Hall Dairy Co., New Haven; E. F. Brown of National Dairy Products Corp., New York City; G. G. Diffenback of Abbotts Dairies, Inc., Philadelphia; J. H. Duplan of Silverwood Dairies, Ltd., London, Ont., Hubert Garrecht of Klinke Brothers Dairy, Memphis; J. A. Reitzel of Bowman Dairy Company, Chicago.

When the first Public Relations Committee was formed the AAA was just going into effect. New problems, most of them of a public relations character were confronting the industry. The public was seeking information about the milk business and many of the answers bore little resemblance to the truth. Mrs. Roosevelt, who should have known bet-

ter, and Henry Wallace, who did know better, were decrying the price spread. They trumpeted the error of a 21 cent spread which they calculated by taking the blend price of milk in Iowa and subtracting it from the price of Walker-Gordon certified milk delivered on the door step in New York. Nobody knew how much milk was produced. There was no source of factual information concerning the milk industry. There was a great deal of by guess and by golly but of solid, valuable facts there was a great deal of nothing.

Nature of Public Relations

To understand what the Foundation did and why they did it one must first understand what this business of public relations is. It is primarily a matter of information. Any enterprise exists because there is a demand by society or a segment of society for the product or the services the enterprise has to offer. The more vital the product or service the greater the public interest in the enterprise. In some cases the services and products have been so vital that society has placed them under direct public control. In other cases, such as public utilities, under indirect public control. The fundamental public relations concept, and don't run away from it just because it sounds socialistic, is that an enterprise functions at the pleasure of society. Society can and does terminate any enterprise that it sees fit to terminate whenever it wishes to do so. It can limit the scope of an enterprise or cause it to expand beyond all expectations. Society, John Q. Public, people, or whatever you wish to call the vast scurrying mass of humanity that makes up our population is the boss. What the boss thinks and what he does as a result of that thinking is what determines the course of all business enterprise in general and your own enterprise in particular.

Now this control that society exercises is manifested either in the form of regulatory legislation or in patronage. A century ago there were many turnpike companies in existence. Today there are none. Why? Private ownership of highways was legislated out of existence. It was the expression, not of one man or a group of men, but of the society. The railroads very nearly suffered the same fate. It is only because public thinking has come to the conclusion that better service is to be had through private competitive ownership that the railroads have remained in private hands. Even so they are stringently regulated by public authority.

The second way in which society exercises its life or death authority is through patronage. Why is it that kerosene lamps for home illumination are largely a thing of the past? Kerosene is still available. A fine artistic lamp could be manufactured. Very possibly the cost of fuel would not be any greater than the cost of electricity. Why did electricity get the green light and kerosene the red? Simply that old J.Q.P. figured that electric lights were better than the kerosene variety. He bought electric lights and he didn't buy kerosene lamps. Result: exit the kerosene lamp business.

As People Think

Society is made up of people. People, although it is hard to believe at times, are thinking creatures. Their actions are the result of their thoughts or their emotions. If the ultimate decision concerning the existence of an enterprise rests with society then whatever influences the thoughts and emotions of the people in the society is of supreme importance. The function of public relations is to see that the public gets the correct facts and the correct interpretation of those facts. Let's see how it works.

The 21 cent spread that Mrs. Roosevelt and Henry Wallace talked about in the thirties was a fact. There was a spread of 21 cents between the blend price of Iowa milk and Walker Gordon Certified. But it was an irrelevant fact. It was like digging a ten foot hole under a cross bar two feet off the ground and saying the bar was twelve feet above the ground. In this particular case the Milk Industry Foundation called the attention of newspaper editors to the fact that the blend price in Iowa was one thing and the farmers price for certified was quite another. The editors soon saw the light and that particular furor subsided.

Working with newspapers, however, is only one phase of public relations. Any means of communication with the public is a tool that must be employed by the public relations man. The Milk Industry Foundations uses the press, radio, motion picture, lecture platform, convention hall, personal contact, in fact almost any form of communication that can be imagined to tell the story of the milk industry.

Two Kinds of Public Relations

There are two sides to public relations in Milk Industry Foundation thinking: internal public relations, that is public relations within the industry, and external public relations, or relations with the general public. To achieve the first phase of their public relations program the Foundation has a newsletter that goes out to all members about every ten days. This newsletter contains information on activities of the Foundation, and on subjects that a man in the milk business would find valuable. In addition to the newsletter there is a public relations letter that goes out at less definite intervals plus a news flash that is sent out

This Is What You Have To Fight

From The Pittsburgh Press
Aug. 26, 1949

FREE MILK SAMPLES

Our State Milk Control Commission, in its own benign way, has decreed that the milk dealers of Pennsylvania may distribute free samples of milk.

Of course, there are a few restrictions, thought up by the commission's bureaucrats. Only one free sample to a customer in six months, and no dealer may spend on samples more than one-fourth of one per cent of his net sales.

The commission also decided, in what must have been an impetuous and reckless moment, that milk dealers may give the customers calendars, baby books or other small articles "useful to the household."

★ ★ ★

If the milk dealers are anxious to try these things it must be because they want to drum up business.

Free samples, calendars and knickknacks are time-tested methods of attracting customers.

Don't suppose, though, it ever would occur to the Milk Commission that one of the best ways to get more people to buy milk is to whittle something off the price.

★ ★ ★

NOTE: The Milk Commission has just ordered a half-cent increase in the price of milk, effective October 1.

—o—

Same Paper Aug. 23, 1949

GEOGRAPHICAL ECONOMICS

In Cincinnati there is complaint about the price of milk.

It is 19 cents there and Cincinnatians can't understand why, when the price is only 18 cents in Dayton, 60 miles away.

Toledo pays 19 cents a quart, too. But Akron pays only 16 and Cleveland and Columbus only 17.

Pittsburgh pays 20½ cents. And the price will go to 21 cents Oct. 1.

Which might be due to the fact that in Pennsylvania, milk prices are under the rigid control of a bureaucratic agency, the State Milk Commission.

when something of an important nature comes up that cannot wait for one of the regular newsletters.

Constant education of its membership is an important phase of the Foundation's program. The milk business is peculiarly vulnerable to public thinking. Yet because it is made up of many small businesses the development of an adequate public relations program for the milk industry is a difficult problem. Anything that affects the public thinking about milk is sooner or later reflected in the market. Public relations people know this but the average milk dealer does not know it or if he does know it he does not have a very clear idea of what to do about it. Consequently the Milk Industry Foundation's educational program attempts to demonstrate the function of public relations and to show individual members how they can utilize Foundation material to solve their own problems.

Types of Material Used

"Meet Your Public" is a 16mm film put out by the Foundation this year. The film, done against a technicolor background with silhouetted characters, is a vivid exposition of what public relations is and what it can do. "If the milk industry doesn't supply the public with the facts about milk somebody else will", is the theme of the picture. To give substance to this constant emphasis on public relations the Foundation has compiled a working kit of public relations material for its members. The kit is composed of five groups of material; advertising, radio, news, promotion and films. The radio section, for example, presents a series of short informative notes written for radio which the dairyman can offer to his local radio station. The pieces are especially for radio and are the kind of material that a radio commentator welcomes with open arms. A full dress radio interview built around the idea that "Milk Is Your Best Food Buy" is also included in the kit.

Most dairymen, up to their ears in the everyday tasks that confront a milk plant operator, do not realize how eager local stations are for good program material. The reason why this Foundation material is so valuable is because it was written by people who know the peculiar requirements of radio writing. It is not propaganda ballyho but an interesting arrangement of honest facts that are important to radio listeners.

At 8:30 A.M. on February 9, 1949 The Pattees, a husband and wife team broadcasting over station WTHT Hartford, Connecticut, incorporated this bit of repartee in their program:

FLOYD: "You know, milk is an outstanding food and milk prices have increased much less than all foods. And latest Government figures show all foods up one hundred and eleven per cent on a national average over 1935 to '39, with home-delivered milk up only eighty-five per cent."

BETTY: "Most folks call it a near perfect food, too, as near as anyone will ever get."

FLOYD: "And most people don't realize the profits of milk companies are about one third of a cent per quart of milk on the national average, which is one of the lowest figures of any industry."

BETTY: "Well, you can't do better than have a good supply of milk on hand at all times."

This is only one example of programs that are utilizing material on milk all over the nation. Where do they get the material? Again the answer is that it is Milk Industry Foundation material that is either mailed to them direct from the Foundation's information office in New York or is supplied by some alert dealer who got the information out of his public relations kit.

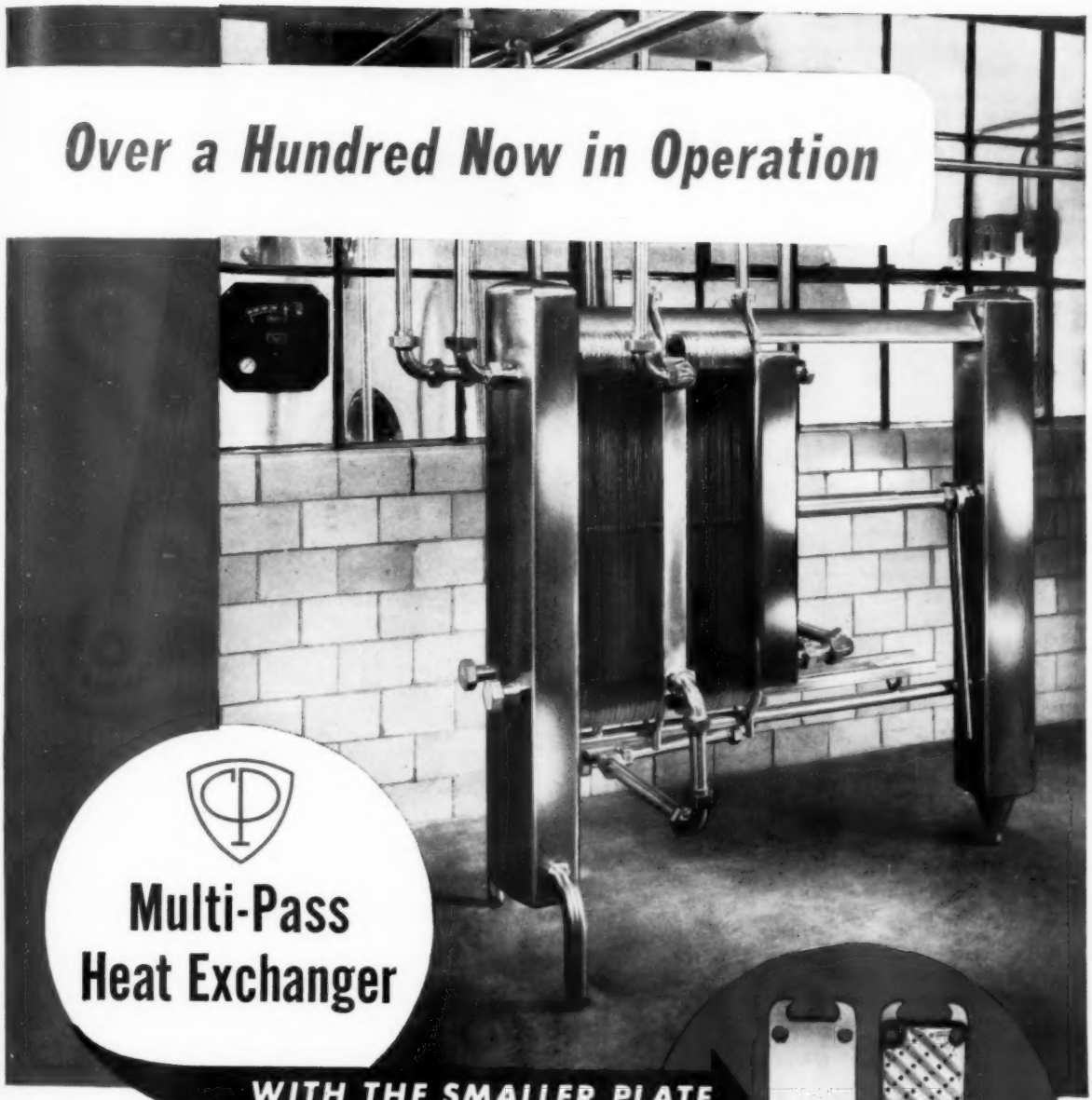
The external phase of Foundation public relations is divided between national and local efforts. On the national scale material is sent directly from the New York office to the newspapers, radio stations, and magazines that might use it. The story on milk as a leading contributor to prosperity is an example of this type of work. Prosperity is always news. Anything that contributes to prosperity is news. But just to say that milk is a large wheel in the prosperity of state and nation does not accomplish very much. To make the statement and then to support the statement with facts and figures accomplishes a great deal.

Here is a portion of the news story on milk and prosperity that went out to Alabama papers. Notice how the article was given a definite Alabama slant. Notice that it deals in facts and not in unsupported generalities. Notice, also how it was written so that it could be stopped at any paragraph.

> Alabama's milk industry is one of the principal assets in the prosperity of the state, according to new figures developed by the Milk Industry Foundation.
>
> People are drinking more milk than in pre-war days and milk is an outstanding low cost food. Milk

Remember Alfalfa Switzer, youthful movie star of a decade past? How was it that he teamed up with a glass of milk to make this eloquent picture? Was it happenstance? Or was some arm of the milk industry involved, an arm that knows its way around newspaper offices and motion picture lots and all of the other intricate channels of mass communication?

Over a Hundred Now in Operation



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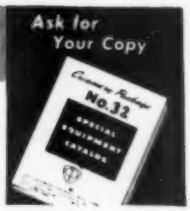
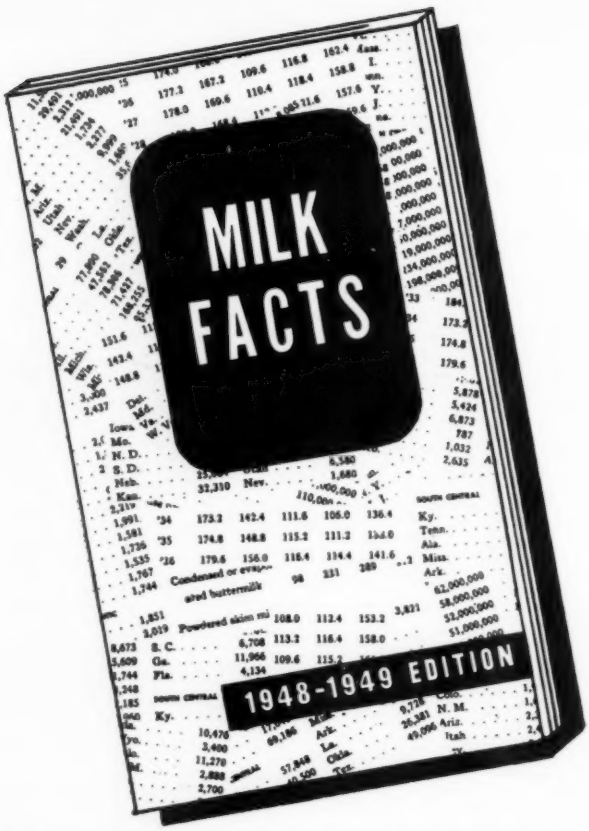


prices have increased much less than "all foods". Latest government figures show "all foods" up 111% on a national average over 1935-39 with home delivered milk up only 85%.

Worth of the industry to the State is strikingly emphasized by the $41,760,000 value set on Alabama's 391,000 milk cows which produced 624,000,000 quarts of milk in 1947, final figures show. Production per cow averaged 1,595 quarts, a new record.

A total of $23,911,000 in cash income was received by Alabama dairy farmers. Increased use of milk for drinking and cooking helped as farmers receive the highest prices for milk used in that form. Cheese production of 4,490,000 pounds and ice cream 6,975,000 gallons plus other dairy products add to the tremendous total which the milk industry pours into the state's wealth.

The milk industry is serving consumers with a high quality product and every possible distribution economy, according to the Foundation. Profits of milk companies are about 1/3 of a cent per quart of milk on the national average which is one of the lowest figures of any industry says the Foundation.



Milk Facts is a small pocket-size booklet which has been issued annually for years by the Milk Industry Foundation and is now known and used throughout the world. It is also known for the excellence of its typographical handling of its detailed statistics in its easy-to-read style.

The Editors Like It

Let's take the story apart. What does it say. First it points out that the price of milk is up 85 per cent compared to an "all foods" rise of 111 per cent. Secondly it gives the value of Alabama's dairy cow population and amount of milk that these cows produced. Then it gives the total farm income received by Alabama farmers for this milk. It mentions the by-products of cheese and ice cream and other dairy products. Finally the story points out that this industry, which contributes so much to the State's well being, furnishes these splendid foods to the people of Alabama almost at cost. It would take a staff reporter days of solid digging to unearth those facts. Yet in this Foundation story all the facts are presented without charge. Interesting, readable facts that people want to know. Honest facts that give the citizens of Alabama the basis for sound thinking about the milk business.

Where did the Milk Industry Foundation get the facts? They dug for them. They took some of the membership dollars and did research work. They compiled a booklet with which most dairymen are familiar called "Milk Facts". They financed a survey conducted by the University of Indiana that investigated the profit on a quart of milk. They acquired an accurate picture of what the milk business really is. Then they proceeded to put these bits of information to work, put them in the public mind where they would do the most good. That is public relations at its best.

During the last few years there have been several stories in national magazines on the subject of notes for the milkman. Where did the authors of those stories get their information? Not long ago the American Weekly carried a lead story on heroism among milkmen. Where did the story originate? Who suggested it in the first place? Who supplied the information? When you go to the theater and see pictures of milkmen in the newsreels battling high water or heavy snow in order to get the milk to the plant or to the home how was it that the news cameramen knew where to go? How did they happen to latch on to milk as a subject for their pictures? Recently the Douglas Aircraft Company came out with an ad on the Berlin Airlift and milk as the new weapon for democracy. Where did they turn for accurate information on the subject. At the rotary club in West Cupcake, a dairyman gave a talk on the milk business. Where did he get his facts? How, out of a busy schedule, did he find time to compile the data and arrange it in such an effective manner? In February of this year Westinghouse conducted a radio program called "Crusade for Pure Milk", it was broadcast over 190 radio stations. The program highlighted the value of pasteurization. Where did the company turn for help in putting on their great show? Behind each one of these episodes was the Milk Industry Foundation.

There is no end to a public relations program. Public attitudes are constantly changing. New problems, new developments are constantly occurring. The old gives way to the new and tomorrow will not be the same as today. In this atmosphere the Milk Industry Foundation keeps the public abreast of the milk industry story. Because it is a good story, because they tell it extremely well for the benefit of the entire industry, the Milk Industry Foundation Program stands as one of the most valuable contributions to the milk business of our time.

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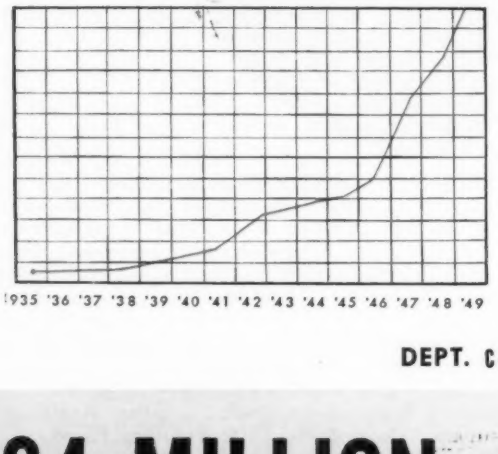

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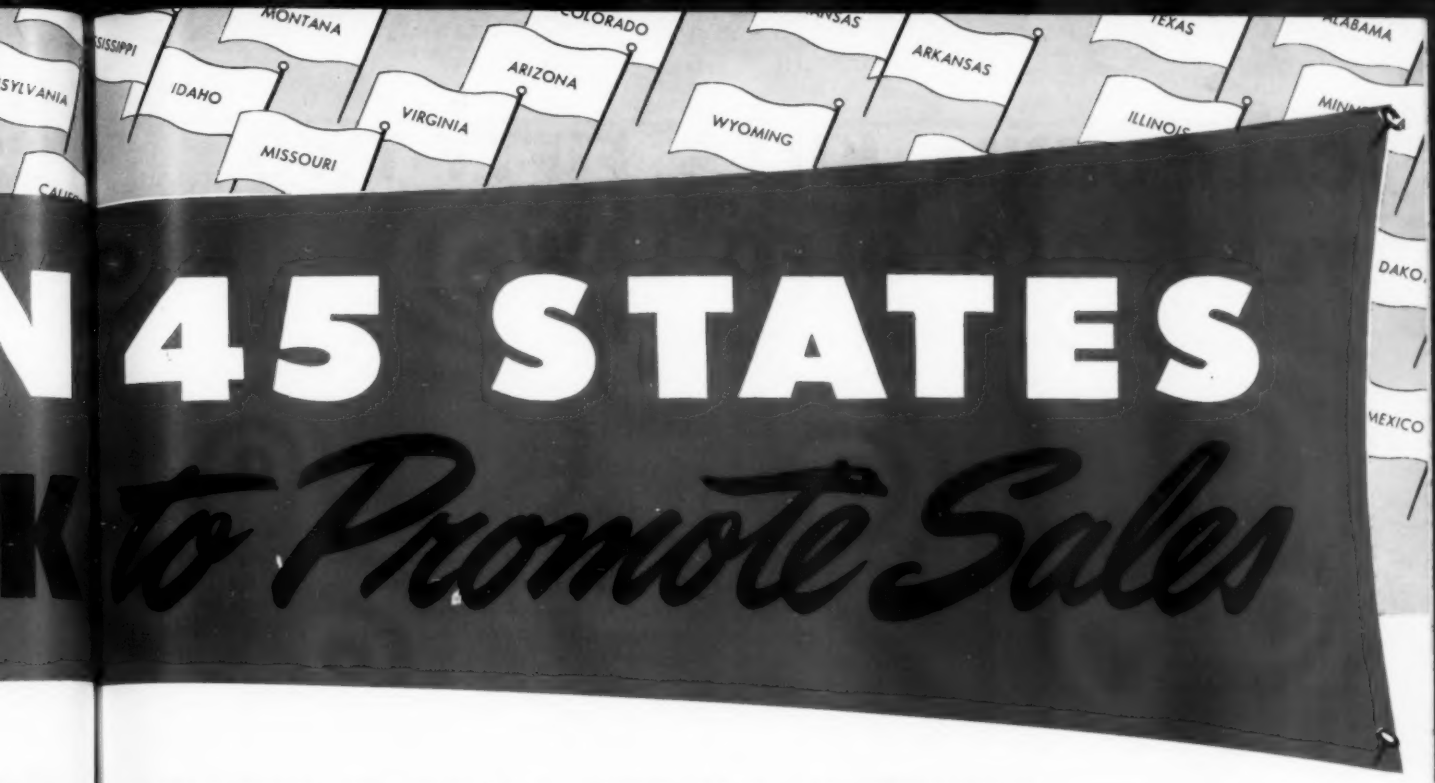

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FREE Newspaper Mats to Feature Your Milk

CALIFORNIA KILLS FIFTY-TWO YEAR–OLD OLEO LAW

Legislators End Session With Twenty-five Dairy Industry Bills Enacted—Ice Cream Weight Sale Law Defeated—Milk Reclassified, Cheese Standards Altered

By **PETER FABRICIUS**
Universal Trade Press Syndicate

AS THE LONGEST legislative session in California's history has ended, dairymen look over the results as far as their industry is concerned. It is the general conclusion that the dairy industry fared much better than it had expected at the start of the year.

The general satisfaction is concerned more with the defeated bills than those passed. Virtually all measures to liberalize unemployment insurance, disability insurance and workmen's compensation acts were killed. Truck legislation which would have increased truck taxes failed to pass. One measure alone would have increased the truck tax to the dairy industry to the extent of about $400,000.

Altogether, the California legislature in 1949 passed 1500 bills, 25 of which affect the industry directly. They all have been signed by Governor Earl Warren, and will become effective October 1st.

Of all dairy laws passed this year the Colored Oleo bill undoubtedly aroused the greatest interest. It enables California housewives to purchase colored oleo at grocery stores. Public eating places are still unable to sell this yellow oleo, however, and in all cases the words "Colored Oleomargarine" have to be stamped on the packages in large letters.

End Fifty-Two Year Oleo Ban

The passing of this bill ended a 52 year old state ban on the sale of yellow oleo. In signing the bill into law, Governor Warren said: "The Legislature has now determined that the long standing prohibition on colored oleo is an unjust discrimination against a food product that is widely used by the people of our state. And I would like to compliment the dairy interests who also recognized this fact and who withdrew their opposition."

Another new law of importance for the California dairyman reclassifies milk for the purpose of pricing. Fluid milk and fluid cream which used to be in two different price classes, are now drawn into one, called class One. Fluid cream is re-defined as any combination of milk and cream with not more than 11.6 per cent milk fat, which now clearly includes half and half. Another measure provides that minimum wholesale prices for fluid milk and fluid cream under the provisions of the California Milk Control Law shall include the prices for sales by distributors to sub-distributors and peddlers who buy in retail packages, and not in bulk. Such prices, according to the new law, may vary from those established for other wholesale customers due to this particular kind of distribution.

Several other provisions re-define milk and milk products. Skim milk, sold for human consumption, must be labeled as such. It is now defined as a product, resulting from complete or partial removal of the milk fat from milk, and establishes the standard as ¼ of one per cent fat and 8.5 solids not fat. Up to now skim milk was defined as a product containing less than 3.5 fat, standard for whole milk. The change was advisable as milk taken from cows often contains less than 3.5 milk fat.

Cheese Standards Adjusted

Cheese standards were adjusted according to new Federal standards, a desirable change as cheese is an important product of interstate commerce. Among the details brought in conformity with Federal standards is now the minimum fat standard for Cheddar and Colby cheese, and the maximum moisture standard of cottage cheese.

Whipping cream is defined in another new law as a product packaged and dispensed from a pressurized hermetically sealed container. It shall be be made from cream which contains less than 150,000 bacteria per milliliter, not less than 20 per cent of milk fat, and not more than 30,000 bacteria after pasteurization.

Sterilized chocolate drinks and chocolate milk also have been redefined by the 1949 legislature. And the Director of the California Department of Agriculture has been authorized to issue a permit for the manufacture and sale of dried milk products when they meet certain standards.

The California Ice Cream Law was amended in several points. All distributors and manufacturers of milk, cream and other dairy products – and not just those who buy from producers – must now keep certain records. And the record of rental agreements for refrigeration facilities rented or furnished to wholesale customers must also be kept for storage use. In another part of the same amendment the legislators regulated the distributor participation in outside and inside advertising of a distributor's milk and dairy products on the customer's premises.

Defeat Ice Cream Sales Bill

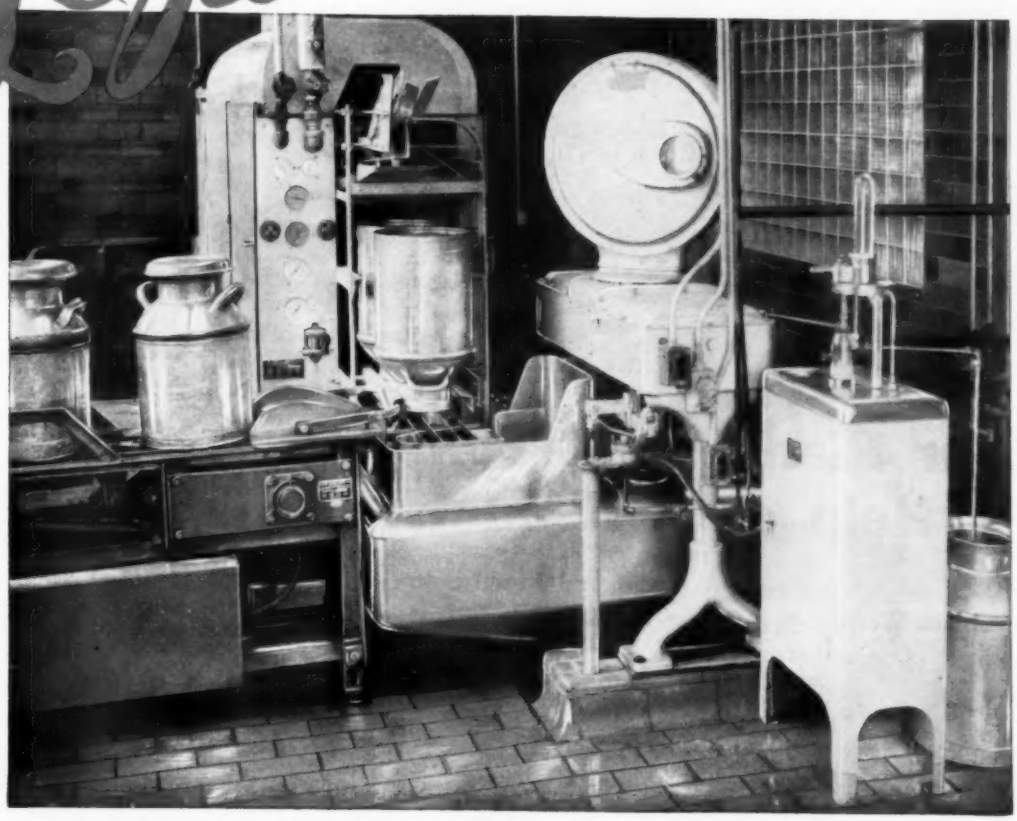
On the other hand, a bill which was objected to vigorously by the California ice cream industry was defeated. It would have compelled the sale of ice cream by weight. Also defeated was an attempt to make unlawful the use of refrigeration equipment for the storage of any product other than the frozen products distributed to the customer by the manufacturer renting the cabinet.

A number of the newly passed measures deal with health problems in dairy herds. One of them which is welcomed most by the dairy industry, provides for increased payment to producers for t.b. cattle slaughtered. The payment is to be $25 to $50 for grade animals, and $75 for purebred animals. The legislature appropriated $200,000 for that purpose.

Some changes were made in the Agricultural Code relating to bovine brucellosis. They concern the official tattoo in the calf's ear indicating the period of vaccination, and clarification of the fact

(Please turn to Page 57)

L-P DOES IT AGAIN



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Now a **NEW, IMPROVED L-P MIKRO-SAN** makes possible a further saving of an additional 35% in steam consumption, with resulting cooler work rooms and less operating expense—in other words—

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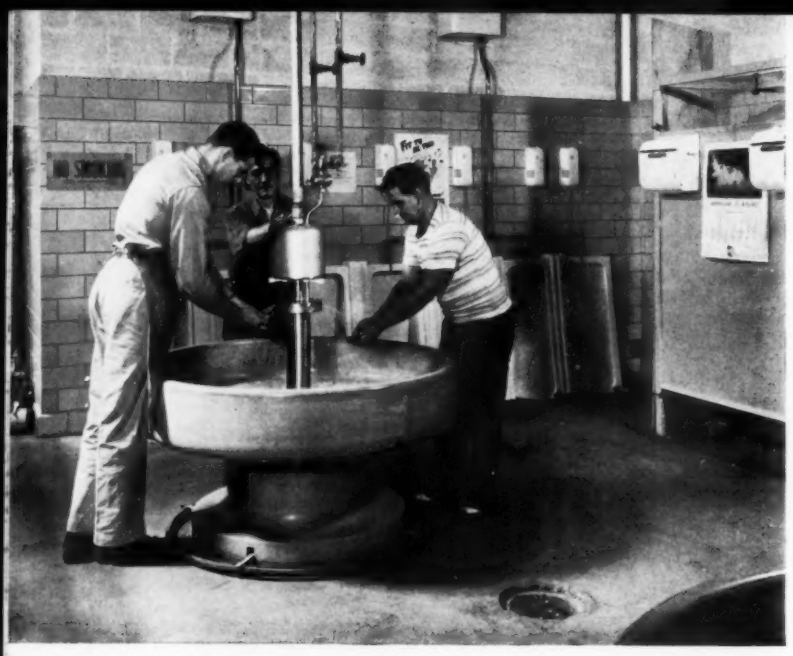


Washrooms used daily by a large number of persons are not as likely to be abused if kept as spotless as this one.

Is Your Plant Washroom A Help or A Headache?

Abuses, Taboo At Home, Are Standard Practice In The Plant Washroom — Proper Maintenance Is One Method of Combatting Inadvertent Vandalism

By **RICHARD IRMITER**
Crane Co.

PLUMBING FIXTURES are tough. They will stand up under a lot of hard usage and still remain smooth and beautiful for a lifetime. But we must remember there is a limit to the abuse they will take. Toilets and lavatories weren't made to stand on, to use as anvils, to act as garbarge cans, work benches or tables. They should be treated kindly and should be kept in repair and cleaned often. Cleanliness is the most effective check to ill treatment of fixtures.

There are definite procedures that should be followed in cleaning and maintenance of industrial washrooms. It should be remembered that maintenance is a constant problem in such installations. Industrial plumbing fixtures are subjected to a hundred times the usage and abuse that home plumbing fixtures have to undergo. A faucet on a home lavatory may be turned on and off only a dozen times a day. In a busy plant washroom a faucet may be turned on and off at intervals of a few minutes all day long—and all night long too, if the plant operates on extra shifts. And many people seem to delight in ill treatment of semi-public or public plumbing. Abuses that are taboo in the home are considered by some to be accepted sport in the plant washroom. They leave the water running; they wrench the faucet handles so tightly that the stems are twisted and seat washers are cut through in just a few shut-offs; they throw cigars, cigarettes and waste paper in the wash baisins and urinals; they plug up toilet bowls with orange rinds and with lunch bags full of garbage; they sit on the edges of wash baisins until the baisins tear loose from the walls; and they put their feet on toilet seats or the edges of lavatories in order to wipe off their shoes.

Repair Fixtures Promptly

Such inadvertent vandalism is almost impossible to control. Policing the washrooms creates ill will and can lead to more and deliberate vandalism. Much of the effect of carelessness can be overcome by a regular maintenance program. For instance, if leaky faucets are repaired as fast as leaks develop, the bad habit of turning the handles off too tightly needn't develop at all, for the water always shuts off when the valve is lightly closed, as it should be.

A dripping faucet not only means accelerated wear on the mechanism, but large water losses. A steady dripping will waste more than 24 gallons of water a day—almost 9000 gallons a year. If a large number of faucets are dripping, extra water costs can be considerable. Moreover, if a leak gets so bad that a stream of water as small as an eighth of an inch in diameter is running, it will only take about 3 days to waste 9000 gallons—that's over a million gallons a year thrown away from a single faucet! Add the losses from even a half dozen faucets leaking a one-eighth-inch stream all day and all night long and you really have a water bill!

Regular Cleaning Important

A regular cleaning program is important. In the home it may be sufficient to scour the plumbing fixtures and trim once or twice a week, but not in a washroom used by dozens or hundreds of people daily. Here a daily cleanup is a minimum requirement. In a washroom where traffic is heavy, two or more cleanups per day may be necessary. Such a planned cleanliness program engenders a greater feeling of respect for the equipment among users. A man is not nearly as likely to put a hob-nailed shoe up on a lavatory rim to tie his shoe laces when the lavatory is sparkling clean as he is when the lavatory is dirty with soap scum and drippings.

Here is something to remember in cleaning vitreous-china or porcelain-enamel plumbing fixtures. Fixtures can be abused in cleaning as well as in use. Most people don't realize that these gleaming white surfaces are virtually the same glass surfaces that make for quality in the finest mirror or window glass. How many scurb-up men would scour the washroom mirrors with a harsh cleanser, or pumice, or sand? The thought makes you recoil? But we see it done every day to washbasin surfaces—yes, we have even seen people use sand to scour washroom lavatory surfaces, which have every bit as fine a finish as an expensive plate-glass mirror.

Handle with care if you would have plumbing fixtures that are glistening and gleaming for their lifetime. If you would know whether the cleanser you use will scratch the surface, take two pieces of ordinary glass and put a bit of cleanser between them. If rubbing the pieces together produces scratches on the glass, there is abrasive material in the

Now..A New-Complete-Rotary Can Washer*

for the small and medium-sized plant

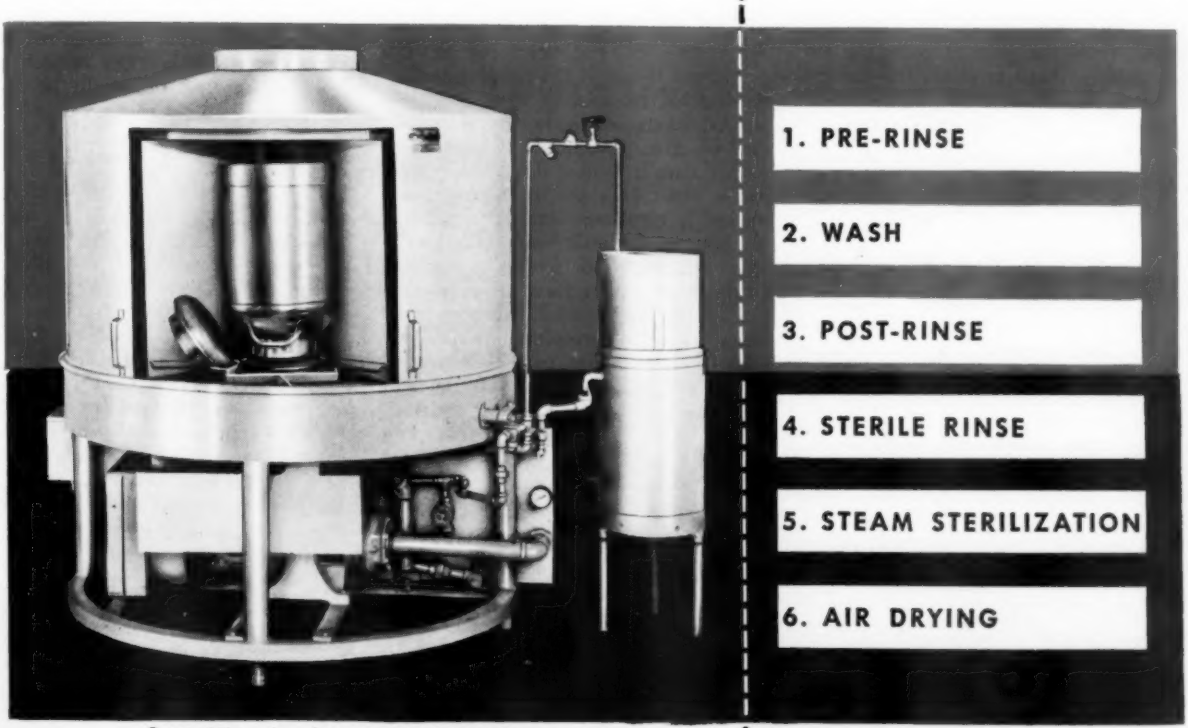
the MotoRo

It's here! A complete, new mechanical can washer, the "MotoRo"... designed primarily for dairies which operate at relatively low capacities and have a comparatively small amount of floor space. It's the "MotoRo" for clean cans — and clean cans for purer, higher quality milk and milk products.

The "MotoRo" is easy to operate and maintain — highly efficient! Cleans 180 cans and covers per hour with complete, long-time treatments. Each milk can and cover is pre-rinsed, washed, post-rinsed, sterile-rinsed, steam sterilized, and air-dried. And the "MotoRo" is economical, too! Large, can-operated valves save steam and water — controlled use of water assures maximum work from every ounce of detergent.

Improve your can washing with the effective, economical "MotoRo" rotary can washer. Ask your Cherry-Burrell representative for further information, or send coupon for Bulletin No. G-453.

*"MotoRo" is also successfully used by many large dairies for on-the-spot cleansing of "house" cans.



Some of the unique features of the "MotoRo" can washer are covered by patents. Other patents are pending.

CHERRY-BURRELL CORPORATION

General Sales and Executive Office:
427 West Randolph Street, Chicago 6, Illinois
Milk and Food Plant Equipment and Supplies
FACTORIES, WAREHOUSES, BRANCHES, OFFICES OR DISTRIBUTORS AT YOUR SERVICE IN 56 CITIES

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The "glass test" can be used to determine if a cleanser is suitable for use on your fixtures. If the glass scratches, harmful abrasives are present in the cleanser.

Dirty fixtures encourage abuse by plant personnel. This man might not have used the lavatory as a shoe-shine bench if the fixture had been spotlessly clean.

cleaning agent that will just as surely scratch your fixture surfaces. Tiny scratches to be sure, hardly noticeable, but continued use of the cleanser will add more and more of the tiny scratches until the glistening finish has been destroyed. Don't be fooled by certain "fast" cleaning agents that derive their cleaning abilities from harsh and crude abrasives. Once the gloss is gone, the surface will be hard to clean, for dirt will become imbedded in the tiny scratches and will defy attempts to remove it.

Treat fixtures with care in cleaning, and cleaning will always be easy, instead of becoming progressively harder. You have never seen a window that required "elbow grease" to clean. A little soap and water will remove the most stubborn dirt from a window. The same is true of plumbing fixtures. Stains and dried grease accumulations *do not have to be scoured away with abrasives.* For a particularly stubborn bit of grime, attack the surface with a generous amount of hot water and a stiff bristle brush. Use plenty of soap to remove grease. Certain cleansers are satisfactory, but don't use a cleanser without first giving it the "glass test" between two pieces of glass. If the glass scratches, don't use this cleanser on your plumbing fixtures. If there is no sign of a scratch on the test glass, the cleanser is fine for this use.

Daily Cleaning Helps

Bear in mind that regular cleaning daily, or oftener, makes surfaces easier to clean. Don't give the dirt a chance to get so that heavy scouring is necessary.

Abusive habits of the cleaning personnel can be the cause of marred fixtures. Scrub-buckets are a major cause of marring on fixture surfaces. Cleaning personnel slam a bucket down on a toilet rim in order to empty the bucket. Or a bucket is carelessly scraped around in the bottom of a utility sink. The inevitable grinding and scraping produces scratches on the surface. Such a practice should be avoided. Rubber mats are available for protection of sink bottoms, and sink rims can be equipped with metal shields to prevent buckets and cleaning tools from marring the rims. Toilets should not be used for dumping buckets if utility sinks are provided for the cleaning personnel.

Keeping drains in condition is another important part of plumbing fixture maintenance. When any fixture runs off slowly, it should be given immediate attention. Slow run-off not only causes wasted time and exasperation for the user of the fixture, but it increases the dirt accumulation on the fixture. Slow run-off is unsanitary. The old standby, the "plumber's friend", the rubber suction plunger, should be on hand at all times, for if quick action is taken with this tool whenever a lavatory or sink plugs up, the difficulty can usually be cleared up quickly.

Use Lye Monthly

Stop-ups can be avoided almost entirely if all fixture drains are treated monthly with a good caustic lye solvent compound. Never allow the solvent to remain in the bowl. Always flush down any surplus into the trap immediately. If directions are followed carefully, no harm can come to the fixture from use of this material. If drains are allowed to become badly clogged from lack of proper maintenance, it may be necessary to disassemble traps entirely to clear up a clogged condition or to use a special plumber's drain cleanere to reach

(Please turn to Page 55)

Be sure that drains are kept free flowing. If a lavatory drains off slowly, sediment in the water will be deposited on the sides of the bowl.

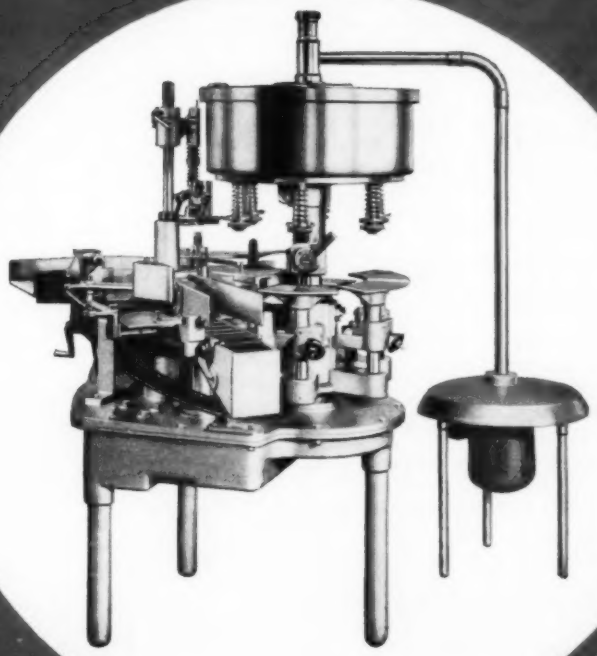
Mops, buckets, and other pieces of equipment give the utility sink a hard time. Protective metal edgings lengthen the life of installations.

Make your profit-picture a prettier one with a Specialty Filler and Capper in your plant. The Automatic, for instance, can handle gallon jugs, two-quarts and smaller round and square glass bottles, and paper bottles, with quick changeover. Specialty's Power Jug Rotary fills and caps gallon and half-gallon jugs with amazing economy. You save a lot on bottling costs with clutch-drive star wheels that prevent bottle breakage or vacuum attachment that destroys foam and helps bottle 24 to 30 quarts per minute. Various models, various sizes up to 12-valves. Write for bulletins that give the exact details.

SPECIALTY
Rotary
Fillers and Cappers

Sanitary Milk-Handling Equipment
is a SPECIALTY business

SPECIALTY BRASS COMPANY
Kenosha • Wisconsin



SPECIALTY
Hand Rotary
Fillers and Cappers

A low cost, practical unit for both small and large plants. Fills and caps with one easy stroke . . . up to 1200 bottles per hour. Completely sanitary, easy to clean. Write for Bulletin 26E.

EDITORIALLY SPEAKING . .

Nail Your Colors, Men

IT WAS JUST TEN YEARS ago that your editor saw the peaks of Norwegian mountains looming through North Atlantic fog from the deck of the S.S. Bergensfjord. There followed a tour through the lovely, verdant Scandinavian countryside. The rich flat Danish dairy land was beyond belief. The rolling fields of Southern Sweden were a fabulous pattern of green and gold. And there was Norway with those terrible, magnificent mountains thundering up four thousand feet sheer from the edge of the fjords.

It is a little bit like going back again to read Professor Wilster's account of the dairy congress in Stockholm. I sat on the steps of the Concert Hall ten years ago and I watched the guards strut like banty roosters in front of the Parliament Building. But even better than the memories I like the stirring idea that the Congress promulgated. "The world wide significance of honest collaboration, equality, and mutual confidence in dairying can hardly be over estimated. We believe that the Congress will be a token of the untiring work performed in the world's largest and most important branch of the food industry – milk production and dairying – which is as vital for producers as for consumers." There, gentlemen, is a mast to which you can nail your flag.

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A Lesson In Team Play

WE HAVE often remarked in these columns on the three way nature of the dairy industry team. It is a team made up of producers, handlers, and equipment manufacturers. If one member of the team is missing the other two might just as well close up shop and go home. This interdependence has seldom been more eloquently expressed than in an article on the dairy industry in Russia which appeared in the August issue of the "*American Milk Review*."

There is the vast Soviet Union with its mighty military machine, its millions of people, its practically limitless resources. Yet in all this great land the simple everyday pleasure of a glass of fresh, safe milk is, for all intents and purposes, unknown.

George Agudov, a Russian D.P. who wrote the article from first hand knowledge as an agricultural engineer and a citizen of the Soviet Union all his life, describes the difficulties with which the average citizen is confronted when he wants to get some milk.

"When a small milk truck drives up to the door of my house in a small American community and leaves for me cool, fresh milk in a sealed bottle with cream floating on top in a special bulge in the bottle, I drink it with great pleasure. The pleasure is soured only by memories of the recent past when I stood with a kettle in my hand literally several hours in a queue in one of the Central cities of the Soviet Union, in order to get some milk for a sick friend. The milk I got in a state milk store came from an old battered milk can, dipped out with a rusty half-liter dipper. I carried it home as quickly as I could fearing that it would sour before I arrived."

That is a mighty important little squib, gentlemen. It is not our purpose to scorn the sacrifices and the tremendous efforts that the people of Russia have made during the past three and a half decades. We remember a fact which many people occasionally forget, that Russia has suffered the devastation of three wars and a great revolution since 1914. Nevertheless, in spite of power and authority more absolute than the world has ever seen before, all of the party's horses and all of the party's men have not been able to put together a glass of fresh, cool, safe milk. The reasons are roads and equipment.

According to Mr. Agudov, refrigeration is almost unknown in the Soviet Union. Only a few, a very few pasteurizing plants exist in all of that tremendous land. Roads, even in the vicinity of Moscow, are poor. There are no refrigerated trucks or refrigerated freight cars. Milk plants have no refrigerating facilities. Most of the marvelous milk handling equipment that we take for granted is missing. The dairy industry in Russia simply lacks the means of transporting milk from the producer to the milk plant as well as the equipment necessary to handle the milk after it arrives. There are cattle in Russia, good cattle. There are land areas admirably suited to producing milk. There are creameries and milk plants. There is a huge market for dairy products. But there is no equipment. One member of the team is missing. Result, a dairy industry that is fifty years behind the times.

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A Chap Named Burnham

ON AUGUST 1 John Burnham, Secretary of the North Dakota Dairy Industries Association took his leave of that organization and hung out his shingle at the North Dakota Agricultural College where he will discharge the duties of Extension Editor. The Association's loss is the College's gain.

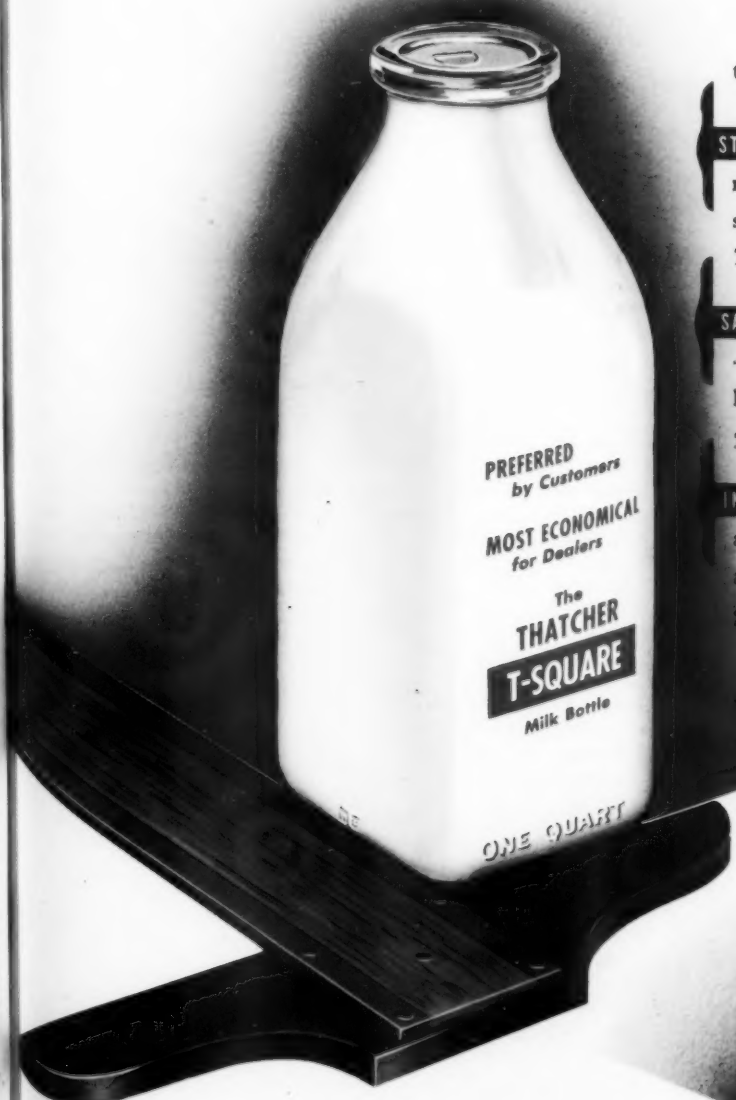
Mr. Burnham has labored long and diligently in the interests of the North Dakota dairy industry. He brought to the North Dakota Dairy Industries Association the experience gained through thirty years as a journalist. He is a builder who brought ability and energy to the task of developing the dairy industry in the northern plains State. Perhaps his greatest contribution was in the field of public relations where his talents found expression in a dairy industry radio program, in wide editorial support, and a growing recognition of the role that a healthy dairy industry could play in the economy of North Dakota. The task of persuading farmers, who had made modest fortunes in wheat and flax, to go in for the year round grind of producing milk was not an easy one. Mr. Burnham tackled the problem and tackled it hard. Not only were there the vagaries of human nature to contend with but there were also the problems of distance and the weather. We recall one letter that we received from Mr. Burnham in which he remarked that the temperature had finally soared to zero for the first time in thirty days.

Mr. Burnham has been a contributor to the American Milk Review. His column PLAIN TALK FROM A PLAINS STATE has been a regular feature of our magazine for the last four months. His portrait of dairyman Roy Bryngelson was another high spot. But of all the things for which we think fondly of J.B. the most outstanding is the immortal phrase that he coined when he had occasion to tell us that his time had been rather completely occupied. "I have been as busy," he wrote, "as a pregnant fox in a forest fire." And that, we submit, is being busy.

● Successor to the Original Milk Bottle

THATCHER T-SQUARES®

The most significant development in milk merchandising since the invention of the first glass milk bottle . . . . Thatcher's T-Square milk bottle opens an entire new field of opportunity for milk dealers. Not since Dr. Thatcher's first glass milk bottle revolutionized the distribution of pure milk have milk plant owners had a better chance to improve operations.



Here is what Thatcher T-Squares, successor to the original glass milk bottle, will do for you:

STEP-UP PRODUCTION Light weight and small size mean faster, easier, efficient handling; more plant space; less breakage; and more volume per delivery. *T-Square your production.*

SAVE MONEY Amazing economy at every turn — cap and hood costs less; overcomes expensive outlays for trucks, and cold room expansion. *T-Square your finances.*

INCREASE SALES Streamlined modern design — a sensational sales appeal; gains 50% more refrigerator space; sells 3 bottles instead of two. *T-Square your sales.*

Call the Thatcher Representative nearest you or write direct for full information so your dairy can convert to T-Squares as soon as possible.

THATCHER GLASS
MANUFACTURING COMPANY, INC.
Elmira, N. Y.

Don't Bring Up Controversial Subjects When Talking With the Customer but Have the Answers Ready if Questions Are Asked, Is One of the

TECHNIQUES OF THE MILK ROUTE

By Dairyman

THE ROUTE salesman should only have a general idea of the products which he has to sell. The reason for this is that the housewife has only a general idea in regard to the Dairy Industry. The routeman, by dealing in intangibles, doesn't get involved in controversial arguments. The main points to stress for the routeman are courtesy, pleasantness etc. If the route salesman places the milk so that it is tipped over when the screen door is opened, the customer will not care much whether it is local milk or not. The milk man should use his head as to the best place to set the milk.

Bacteria is a poor subject for routemen to try to discuss because of the average housewife's ignorance of bacteria. This is a subject which should be avoided. Besides, state, town and city Health regulations are such today that if the milk is too bad it will be excluded from the market. Rather than discuss bacteria with a customer, the Salesman will be ahead to say his product complies with local and State health regulations, therefore it has to be O.K.

Teamwork Necessary

A routeman should have a general idea of butter fat, homogenization, pasteurization, Vitamin D, local or out of state milk, but it is still best not to get involved with a customer on these points. The routeman's company by newspaper or radio advertising should stress the main points of the products they are selling. The routeman should know what is being currently advertised and be prepared to answer generally any questions which may come up. But after all, how often does the average housewife see her milkman?

I think that an extremely important point often overlooked is how a routeman drives his truck. If he cuts in front of people or doesn't observe the rules of the road, he can easily lose customers. Where he parks his truck is a little thing but mighty important. Don't get the idea that I think a driver should be a dumbbell. Far from it. But when a driver has 600 quarts to deliver in 5 or 6 hours, he just doesn't have much time for discussion. To take as an example a milk dealer friend of mine, his men make about $80 a week. They are satisfied. After they have delivered their milk they go home. They work from 6 a.m. to 12 or 1 p.m. They get a salary and commission. Instead of spending an hour or two each day soliciting for new business they say the heck with it. My friend does an excellent job of advertising his products in the local newspapers. The result is 90% of his new business comes in over the phone; 10% from the routemen, and even then, by people who stop them and ask if they will leave them milk.

AMERICA'S FAVORITE

Milk is far and away the favorite beverage of Americans, according to an American Can Company survey of the nation's drinking habits.

Milk, beer, soft drinks, coffee and canned fruit and vegetable juices are the top five beverages preferred by the average American gull[illegible] survey shows.

Time after time we hear of routemen who try to get customers by knocking the other milkman. They say the other fellow's plant is dirty, his milk is poor, bacteria count high etc. In the end that fellow doesn't get the order. The average woman doesn't fall for that stuff. She is also apt to question her milkman. If he is on the ball he can refute all the misinformation. He should have a good general knowledge so he can talk intelligently. But to get involved and get a woman worried about bacteria is bad business. To her all bacteria are bad. She doesn't differentiate between pathogenic bacteria and non-pathogenic.

Must Have Good Product

For any route salesman to sell his product today he has to have a good product. If he has it, he can say "Madam, look at this quart of milk, notice the nice cream line. I would like you to try it. The taste of our quart of milk will convince you." A woman is much more apt to fall for that line than a controversial one. The power of suggestion is a powerful factor providing that it is used correctly. Still in a general vein, if the milk is locally produced that point should be mentioned too.

I haven't given you anything really new here. This is how I feel in regard to routemen and it is based on information I have received from talking to different dealers. It is poor business to knock the other fellow. You have a better chance of getting the business if you stress the good points of your own products. Of course, there are the unreasonable customers who, if they get stuck in the snow in the winter time and happen to see their milkman, who has sense enough to have chains, expect him to give them a push. In such cases I think the line has to be drawn in regard to the extent drivers should cooperate. If I were the driver and I could give the guy a push without too much trouble, I suppose I would do it.

Use of Inner Disc Caps

One of the best ideas I have seen for increasing sales is the inner disc cap. In these cases you have a disc cap which says "Try our Sour Cream for your Salads – sample enclosed". Of course, this can be worked out for cottage cheese, eggs, Vitamin D milk, ice-cream, buttermilk, coffee cream, heavy cream etc. I know one dealer whose business is 3,000 quarts. His Vit. D business is now up to 450 quarts in 9 months time. He attributes 90% of it to the use of the inner disc cap. The idea is to run the inner disc cap about 10 days then change to another cap with a distinct color change advertising another product. In that way the housewife's interest is kept alive. Another dealer told me he had a cap made up for eggs. He was surprised at the number of women who told him that they never knew he carried eggs. His egg business, of course, increased tremendously. With a two cap operation this program can be carried out as the hood carries the dealer's name, town, identification of product, and date.

ALREADY A NATION-WIDE SUCCESS
50,000,000 Cans Sold in 9 Months

Let REDDI-WIP Add New Volume and New Profits to Your Business!

Dairies who wish to add to their profits, prestige and leadership should arrange to distribute Reddi-Wip immediately. No imitation can begin to match Reddi-Wip's advantages. Already established as the 5-to-1 leader over the whole field—it is now about to launch national advertising starting with a full page in Life in September. Watch for our announcement next month of complete program, including national magazines, radio and television. Chain grocery stores and other important food outlets throughout the country are being covered with intensive promotion. Reddi-Wip's proven sales methods offer immediate opportunity to increase dairy profits and volume on routes and through store sales.

Only Reddi-Wip can give you the genuine Reddi-Wip formula, superior Reddi-Wip mechanism. Tie up to the outstanding leader now. This decision will prove more advantageous each month as the complete Reddi-Wip national promotion unfolds. Write or wire for Reddi-Wip information immediately.

REDDI-WIP, Inc.

3938 LINDELL BLVD. • ST. LOUIS, MO.

WHAT REDDI-WIP IS

Reddi-Wip is made with pure, pasteurized, 30% butterfat cream. Each can containing 7 net fluid ounces makes nearly a quart of the whipped product. It whips itself at the touch of a finger.

The Ambassador Hotel, spacious and luxurious, will serve as headquarters for the Milk Industry Foundation's three day session. Special trains from the East Coast and Chicago will carry dairymen to the Golden Land.

49'ERS - DAIRY INDUSTRY STYLE

Superb Programs Arranged for Annual Conventions of Milk Industry Foundation and International Association of Ice Cream Manufacturers at Los Angeles in October

IT'S HARD TO BELIEVE it but it's a fact—Convention time is here again. Another month and the special trains will roll, west-bound for Los Angeles. In what promises to be a series of meetings of great significance to the industry, the International Association of Ice Cream Manufacturers and the Milk Industry Foundation will gather for their annual conferences with the Dairy Industry Supply Association in a stand-by status, in California's City of the Angels from October 24 to October 28. The Foundations Convention will be a three day affair October 24 to 26 while the IAICM sessions will run from October 26 to 28.

Hotels for Foundation members in addition to the Ambassador are: Arcady, Chancellor, Chapman Park, Figueroa, Gaylord, Hershey Arms, Kipling, Langham Apartment, Mayan, Normandie, Town House, Traymore, and the motor courts—Tropicana and Vine Lodge.

The Convention Ice Cream sessions begin with the joint general session held under the auspices of the International and the Milk Industry Foundation in Philharmonic Auditorium at 1:30 p.m., Wednesday, October 26th. The second and third general sessions will be held in the Biltmore Theater from 1:30 to 5:00 p.m., Thursday and Friday, October 27th and 28th. Speakers of outstanding national reputation have been asked to participate in the sessions and delegates are assured that they will hold much vital current information.

Many Nations To be Represented

The fluid milk industry convention will bring together milk dealers from the United States, Canada and many foreign lands. Three days of discussion of industry problems will feature the meetings—the first Foundation Convention on the coast since 1937.

"The Milk Industry Foundation conventions are gatherings of the leaders of our industry who come eager to learn from other members of the industry, as well as to contribute to the general progress and to further ideas of their own for future improvements," says F. H. Kullman, Jr., President of the Milk Industry Foundation.

"Mornings will be devoted to the General Sessions, with addresses and discussions of interest to everyone in the industry. Each afternoon the five sectional meetings are held. Here department heads meet to discuss topics that are timely and important to their work. At these sectional meetings the newest subjects of greatest interest are on the program for Sales and Advertising, Laboratory, Plant, Milk Supply and Accounting.

"The Sales and Advertising meetings produce hundreds of good ideas. Public Relations will be an important topic. The town meeting type of program successfully encourages floor discussions and presentation of many views and answering of questions on advertising methods, hiring and training salesmen and other subjects.

"In the Accounting Section the meetings will feature subjects that develop money-saving ideas for members, new ways to solve management problems. New methods, new ways of locating and reducing losses will be on the program.

"Laboratory Section programs are widely known as America's leading dairy scientists tell of new methods of control. New products, new methods of handling old products, more economical operation of milk plants are important topics today.

"The Plant Section will spotlight new equipment, plant layout and design, new methods of operation, metals, flavors, detergents, power, refrigeration, maintenance and design and operating problems.

"Quality and trends in production will be a big topic in the Milk Supply Section. Related problems such as the care of milk on the farm, more production per cow, feeds and many other subjects

(Please turn to Page 52)

Why We Advertise Regularly in the American Milk Review

"As you know, we doubled our space with you in 1948 and the results from our advertising in your publication were very gratifying.

"It was our experience that American Milk Review produced more inquiries than any other publication in the milk field which we used. Almost invariably the inquiries made mention of the American Milk Review. Frankly we were a bit surprised, but agreeably so.

"Evidently the character of the editorial matter which you publish together with your large circulation is responsible."

ADOLPH STOELTING
President
STOELTING BROS.

AMERICAN MILK REVIEW . . .
THE INDUSTRY - WIDE NEWS
MAGAZINE OF OVER 15,000
MILK PLANT OPERATORS

DYNAMIC CHARACTER OF MILK IS THEME OF WORLD DAIRY CONGRESS

Crown Prince Gustav Adolph Sees Milk As Key to Better Standard of Living — Delegates From Sixty Countries Attend

By **DR. G. H. WILSTER**

THERE can be no material improvement in the general standard of living throughout the world without an increase in the production milk, His Royal Highness Crown Prince Gustav Adolph of Sweden told more than two thousand delegates to the International Dairy Congress at the opening session held in Stockholm's famed Concert Hall on August 15.

Speaking in faultless English, the Crown Prince declared that the present world production of milk, approximately 150 million metric tons, is below the pre-war out-put. This reduction in dairy production caused by the war has been accompanied by undernourishment, especially of young children, he said. The solution lies in raising production to the pre-war figure, the Crown Prince declared.

The Congress sessions were held in the Parliament Building. According to Lars Olsson, Assistant Secretary of the Congress, 60 different countries were represented at the Congress with 2150 persons participating.

B. von Stockenstrom, former Swedish Minister of Agriculture was President of the Congress and Waldemar Ljung, Director, the Swedish Dairies Association, was Secretary General. The 12th Congress was the first held in a dozen years. In the foreword to the program of the meeting it was pointed out that "The world wide significance of honest collaboration, equality, and mutual confidence in dairying can hardly be overestimated. We believe that the Congress will be a token of the untiring work performed in the world's largest and most important branch of the food industry – milk production and dairying – which is as vital for producers as for consumers".

The International Dairy Federation which sponsored the Congress, has, as its object, the grouping together of dairy associations of all countries, with a view to securing the universal development of scientific and technical dairy interests. At present 21 countries are affiliated to the Federation.

The subjects for discussion during the five-day meeting were divided into six sections: Milk production, hygiene and control; physics, chemistry and microbiology; dairy industrial technique; economics and trade; organization of the dairy industry; tropical dairying.

A total of over 400 reports and communications were submitted for discussion. These originated in about 40 countries. They were printed in five volumes of reports.

A general reporter was appointed to summarize the papers submitted under each subject.

The following is a brief synopsis of some of the material discussed during the Congress:

Sweden Has Highest

It was stated during one of the meetings that the consumption of milk and dairy products is higher in Sweden than in any other country. The state of consumption of dairy foods depends on (1) standard of living, (2) quality and (3) price, it was pointed out during the meeting of the economics and trade section, where Dr. Leland Spencer was the general reporter. The prices of milk and dairy products are lower in Sweden than in most countries, it was reported. The quality of the products is good and the standard of living is high. Investigations in the United States, England and Sweden show that the consumption of milk and dairy products mainly depend on the consumer's income. When income increases, the consumption of these foods also increases, and vice versa. During the last decades the standard of living has risen considerably both in the United States and Sweden, and this has led to an increase in total milk consumption. The total food consumption per capita per day in the United States somewhat exceeds that of Sweden, but the consumption of milk and dairy products is much higher in Sweden. Statistics presented show that at present, milk, cream, cheese and butter are consumed in quantities which correspond to an average of 780 calories per capita per day. The corresponding figure for the United States is 456 calories. The higher consumption in Sweden may be due to the comparatively low cost of milk and dairy products.

Ethel Martin Reports

The subject of the food value of milk and dairy products for human consumption and means for increasing their consumption was ably discussed by Mrs. Ethel Austin Martin, Director Nutrition Service, National Dairy Council, Chicago. She reported that investigations by the National Dairy Council has shown that milk and its products are not only of high nutrient value, but also the cheapest food, in spite of the comparatively high milk price in the United States. It had been earlier shown, Mrs. Martin stated, that milk is an excellent food for children, but it has also been proved that a balanced mixture of milk and milk products also supply sufficient quantities of nutrients to adults. Lactose, which is found only in milk and certain milk products, has a remarkable ability to promote the growth of certain lactic acid-producing bacteria which tend to displace undesirable putrefaction forms in the intestinal tract. Milk contains a wide variety of minerals which serve as building or regulatory materials in the body, especially calcium and phosphorus. One litre of milk (slightly over one quart) will meet virtually all of the calcium needs and more than half of the phosphorus requirements of an adult and most growing children. Data obtained in the United States show that milk and its products furnish approximately 75% of all calcium in the national food supply. Recent research has shown that adolescents should consume at least one and one-half quarts of milk a day. Even older people need at least one-half quart of milk a day in order to avoid demineralization of the skeleton. It is simply impossible to supply the body with the required amount of calcium without including milk and milk products in everyday meals, it was reported. The excellent vitamin value of milk and milk products was also discussed.

Best Way to Protect Your Profits in Dairy Products

COMPLETE EQUIPMENT BY DAMROW

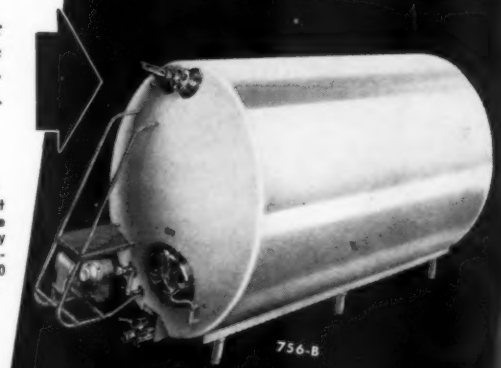
Damrow equipment is engineered to give you a wider spread between costs and sales price. Over forty years of experience are at your service to translate your needs and wants into equipment units that prove themselves in improved production, lower operating and maintenance costs, longer life and protection to your dairy products quality straight down the line. Look for this high standard in Damrow weighing-receiving units, can washers, milk filters, receiving, holding, storage, processing and mixing tanks, pasteurizers, hot wells, conveyors and many handy accessories. They're all custom-designed for YOU — built for your exacting needs — and field-serviced to be sure they consistently meet those needs to your complete satisfaction.

DAMROW Stainless Steel PASTEURIZERS

Offering more thorough agitation, faster heating, efficient cooling, Damrow Pasteurizers have famous Vapor-Film "bottom-up" heating which is faster, more uniform, safer, cannot produce "hot spots" or affect milk flavor. Provide "balanced agitation" with precision-engineered heavy-duty type agitator. Capacities from 30 to 1,000 gallons.

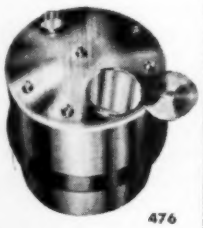
DAMROW Stainless Steel STORAGE TANKS

Streamlined, modern, strong, rigid, completely sanitary, designed for refrigerated milk or mix storage, for mixing and "standardizing." Have removable Stainless Steel Cooling Coils, heavy insulation, effective agitation. In many sizes and variations from 1,000 to 10,000 gal. capacity.



DAMROW
Stainless Steel
HOT WELLS

Modern design for through-floor mounting. In standard diameters, 48", 60" and 72". Capacities from 200 to 1,000 gallons.

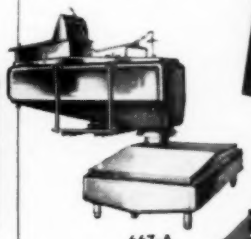


DAMROW
Stainless Steel
PROCESS TANKS

Have Vapor-Film "bottom-up" heating, "Balanced Agitation," efficient cooling, and many other advantages. Available in capacities from 500 to 1,200 gallons.

DAMROW
Stainless Steel
WEIGH-RECEIVING UNITS

Convenient, sanitary, built for long-life service, these units are available in many efficient combinations in capacities from 600 to 1,000 lbs., also in "Junior" units.



Standardize on DAMROW . . . the equipment that "Costs Less to Own"!

DAMROW BROTHERS' COMPANY
204 WESTERN AVENUE, FOND DU LAC, WISCONSIN

DAMROW . . . PERFORMANCE - ENGINEERED EQUIPMENT FOR THE DAIRY INDUSTRY

CHECK AND RETURN THE COUPON FOR DETAILS

DAMROW BROTHERS' COMPANY
204 Western Avenue, Fond du Lac, Wisconsin

Please send literature and details on the following Damrow Equipment:

☐ Storage Tanks ☐ Truck Tanks ☐ Can Washers
☐ Process Tanks ☐ Receiving Units ☐ Conveyors
☐ Pasteurizers ☐ Weighing Units ☐ Others .....
☐ Hot Wells ☐ Filters

Name .....
Address .....
City ..... State .....
Att. of .....

PLAIN TALK from a PLAINS STATE

By JOHN BURNHAM, *Fargo, North Dakota*

When John Burnham took on the task of turning out a monthly column on the dairy industry in the northern plains states he was Exccutive Secretary of the North Dakota Dairy Industries Association. On August 1 Mr. Burnham left the Association for new duties as Extension Editor at North Dakota Agricultural College. We wish him all the luck in the world and hope that the cloistered environment will be conducive to a continuation of the plain talk that we welcome.

THIS IS being written on my last afternoon in this job, before I leave the dairy association work for another position. In fact, this is the last time I shall speak as the executive secretary of an association of dairy plant operators. And what I shall say probably will be similar to the pile of stuff I've taken out of my desk drawers today – some items which seem important, some which to the observer seem trivial.

* * *

FIRST OF ALL, regarding you plant operators and your trade associations. (Please remember that I speak in generalities, and wish to offend no one.) I honestly think you could get more out of your trade associations if you put more into them. Probably the boys in dairy association offices in other states will agree with me when I say that nothing gets us down like unresponsiveness. When the members are writing encouraging letters, that is fine. When they write critically you know they are interested. But when you ask, in letters or in your bulletin, for a showing of hands on this or that – and get absolutely no response – it is baffling and disappointing to Mr. Secretary.

I know you can't churn butter and carry on an active correspondence at the same time. But some of you guys – you who never write – don't know how inspiring it would be if your secretary had just a postal card from you, once in awhile, saying what you thought about oleo legislation, the proposed series of quality meetings, the recent questionnaire on Saturday night closing, or Senate Bill 999 now before the legislature.

Your secretary is supposed to do as you direct. How can he, if you never direct him? Yet how often it is the operator who never writes and never attends a meeting who will confide to his colleagues how "two or three of the boys are running our organization, and the secretary does just like they tell him to do."

* * *

IT IS EASY for a dairy trade association to become cluttered up with a lot of little projects. An association might be more successful if it had a few, definitely identified, projects and only in emergency cases diverted or enlarged that program. How easy it is for some director to come to a meeting and say, "Our association ought to carry on a publicity campaign regarding bruccelosis." At the other end of the table a man faced with his own problems will suggest that the secretary spend more and more time studying up on labor relations, since there seem to be a few shoals ahead and a good helmsman is needed. Someone else suggests we should buy 4H calves for the boys and girls, and another director suggests that the secretary should get himself an assignment on the convention programs of the bankers, implement dealers and Rotarians, so other groups could hear the dairy gospel from an authentic spokesman for the industry. (These instances are hypothetical, so don't get sore.)

It all ends up with the secretary given such a voluminous and variegated job that he cannot handle all portions of it thoroughly or competently. I have in one and the same day (1) written copy for a six-page bulletin; (2) written and made a radio talk; (3) gone out to a sales barn to look at and evaluate a truckload of heifers; (4) after a quick washup gone to a committee session to judge drawings which may be used in future dairy publicity; (5) filled out a statement for Uncle Whiskers, attesting to our tax-exempt status as a non-profit organization; (6) called around and finally located a refrigeration engineer to make an emergency call at one of our member plants. Somewhere in the midst of that day there was a five-minute coffee date with an old newspaper colleague who lit a cigarette, gazed at us a moment speculatively, and then said, "Say, just what in hell do you find to do in that job of yours?"

* * *

HERE'S an item we suppose should be handled with kid gloves: We've visited dairy plants in several states. Some of them are neat and clean, some less so. Continuously in news reports, on the air, in the trade press, in pamphlets which our national association prepare for school kids and adults, there is the gospel of dairy purity, "nature's finest food," and the usual concern with quality production. Many plant operators can tell you in detail how Farmer Jones should get that pure life-giving fluid out of Old Brownie and – with a marvelous co-ordination of surgically-clean utensils and ultra modern cooling devices – get the milk or cream to the plant without any deterioration in quality. That's fine, and we're all for it.

But sometimes we wonder if some of those boys took a good whiff at the rear premises of their own plants. I have a particular prejudice against the combination milk and poultry processing plants where manure-caked chicken coops are piled in slatted disarray in the weeded area between plant and driveway, and where chicken feathers and chicken smells dominate the atmosphere of plants which make butter, ice cream, fluid milk, other dairy products.

Dairy plant personnel, too, may occasionally appear slightly less spic and span than our continual pronouncements about cleanliness would indicate. Have you looked at your own plant men lately? And your own premises? If we believe in cleanliness – and we all do – it should, like charity begin at home. If we try to

(Please turn to Page 52)

Buflovak EVAPORATORS

Designed For Profitable Operation

TODAY... TOMORROW

-Next Year

. . . Yes, and for many years to come. When you install a Buflovak Evaporator, your investment is protected against obsolescence. Here is truly advanced equipment. Buflovak's continuous and exhaustive research paces the progress of a rapidly changing industry.

With a Buflovak Multiple Effect Evaporator you produce top quality condensed and evaporated milks at the lowest possible production cost. Rapid concentration with short exposure to heating surface produces a concentrated milk of excellent flavor, uniform texture and exceptional smoothness. All Buflovak Evaporators recover more than 99.9+% of solids. The Buflovak Double Effect Evaporator affords a 50% saving in both steam and cooling water, while the Triple Effect Evaporator* realizes a 67% saving in steam and an 80% conservation of cooling water. These savings are in comparison to single effect operation.

*Equipped with Vapor Milk Heaters. Vapor Milk Heaters can be furnished with new equipment or can be fitted into existing installations.

In Big Plants . . . In Small Plants

Buflovak's profit making performance is now available to every manufacturer of concentrated milks . . . regardless of plant size. Buflovak Evaporators come in a wide range of sizes and styles from the small single effect model for continuous operation to the huge triple effect models that effect 67% savings in steam and 80% reductions in cooling costs. Pictured is a typical Buflovak installation. In this plant, automatic controls stabilize operation of four Buflovak Double Effect Evaporators. A million pounds a day are processed during the peak.

For Complete Plant Flexibility . . .

THE *Buflovak* ROLLER DRYER

When you supplement your Buflovak Evaporator with a BUFLOVAK ROLLER DRYER, you are ready to meet any conceivable market demand. Buflovak Milk Dryers profitably dry skimmilk, whole milk and sour milk with profitable results. The incorporation of many exclusive features enable producers to increase profits through top product quality, large capacity and low production costs.

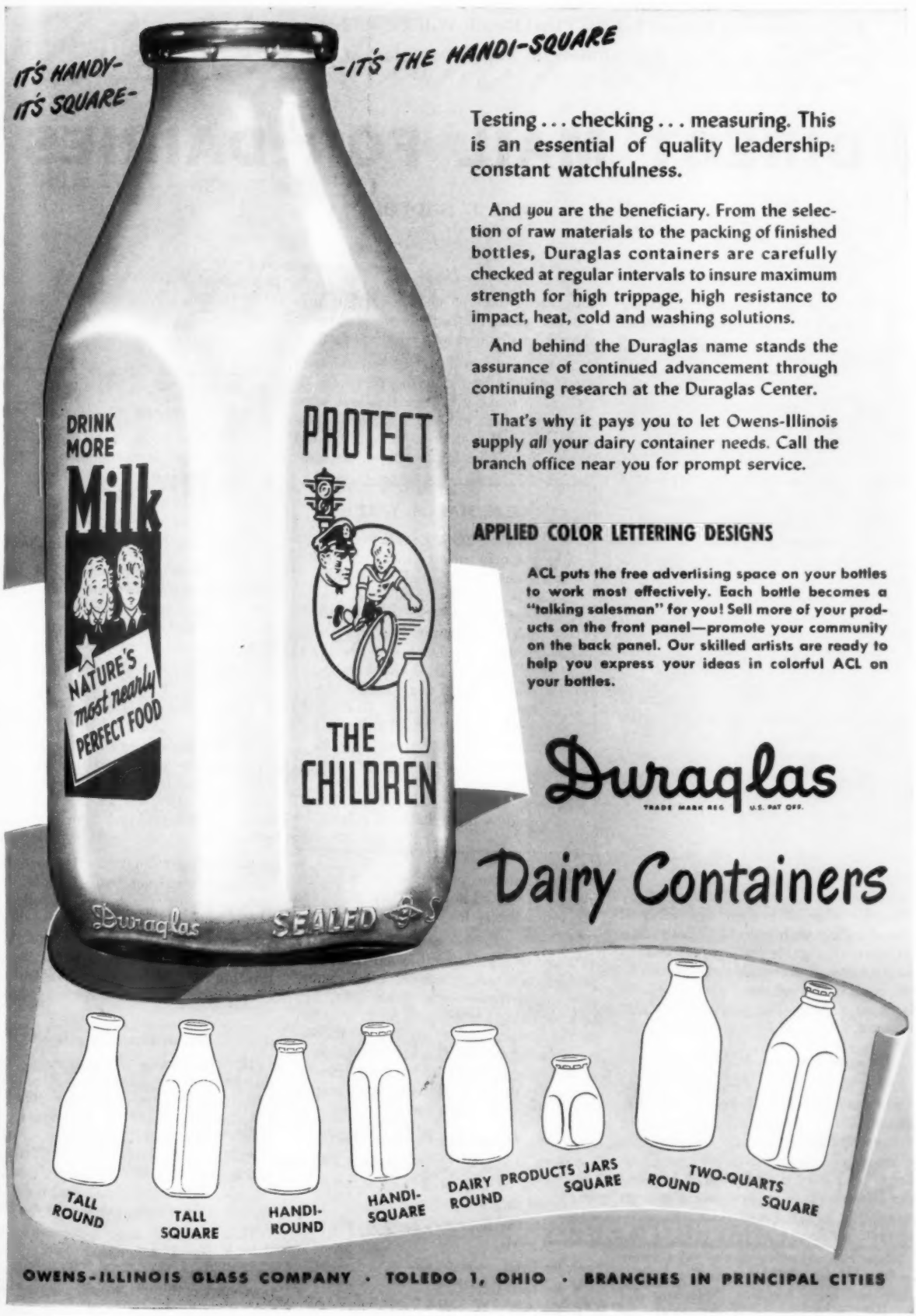
SEND FOR BULLETINS No. 343 and 344

BUFLOVAK EQUIPMENT DIVISION
OF BLAW-KNOX COMPANY

1611 Fillmore Ave. Buffalo 11, New York

293 Madison Ave. — New York 17
2217 Olive St. — St. Louis 3
1636 Monadnock Bldg. — Chicago 4
1706 Broadway — Oakland 12, Calif.

Because of what happens HERE...
Your Bottles last longer HERE...
This is the "thermal shock test." It determines the amount of temperature change that bottles will withstand to insure their practical operation in your washer.


IT'S HANDY-
IT'S SQUARE-
-IT'S THE HANDI-SQUARE
DRINK MORE Milk
NATURE'S most nearly PERFECT FOOD
PROTECT
THE CHILDREN
Duraglas
SEALED
Testing . . . checking . . . measuring. This is an essential of quality leadership: constant watchfulness.
And you are the beneficiary. From the selection of raw materials to the packing of finished bottles, Duraglas containers are carefully checked at regular intervals to insure maximum strength for high trippage, high resistance to impact, heat, cold and washing solutions.
And behind the Duraglas name stands the assurance of continued advancement through continuing research at the Duraglas Center.
That's why it pays you to let Owens-Illinois supply all your dairy container needs. Call the branch office near you for prompt service.
APPLIED COLOR LETTERING DESIGNS
ACL puts the free advertising space on your bottles to work most effectively. Each bottle becomes a "talking salesman" for you! Sell more of your products on the front panel—promote your community on the back panel. Our skilled artists are ready to help you express your ideas in colorful ACL on your bottles.
Duraglas
TRADE MARK REG U.S. PAT OFF.
Dairy Containers
TALL ROUND
TALL SQUARE
HANDI-ROUND
HANDI-SQUARE
DAIRY PRODUCTS JARS ROUND
SQUARE
TWO-QUARTS ROUND
SQUARE
OWENS-ILLINOIS GLASS COMPANY · TOLEDO 1, OHIO · BRANCHES IN PRINCIPAL CITIES

You're Sure of a Glance but the Final Result Will Depend on Your Copy Says the Author in This Discussion of

DIRECT MAIL FOR DAIRIES

By **J. E. BEDFORD**

"I'M not in the mail-order business," a dairy owner recently remarked. "Why should I use direct mail advertising?"

At first glance it wouldn't seem that this milk plant owner could use direct mail advertising to increase his milk business. Many others are of the same opinion—some because they have tried a mail campaign and were disappointed with the results of their effort and expense.

On the other hand, some milk plant owners believe, and rightly so, that direct mail advertising can get results for their business. These dairymen know that a direct mail campaign properly planned, carefully produced, sent to enough logical prospects, and followed-up quickly will produce more milk business.

Yes, direct mail advertising can be used successfully by milk plant owners. Uses include adding new names to the route list, increasing the amount of milk delivered, regular customers, building good will for the dairy, announcing new lines or changes in service, and keeping customer turnover at an absolute minimum.

How can milk plant owners develop powerful direct mail advertising?

Here are some suggestions made by dairymen who have used this form of printed selling with success. These ideas can serve as a guide for anyone contemplating using direct mail for the first time, and as a source of new ideas for milk plants now using the postmen as extra salesmen.

Definite Purpose Is Necessary

Every piece of direct-mail advertising should have a definite purpose for being written. When a route salesman is hired he has a definite job to do and with his duties clearly specified there is a yardstick to measure his sales results. If every sales letter written is given some task to accomplish it will be easier to measure the final results.

When the objective of the sales letter has been clearly defined it makes writing easier and more forceful. Selecting the mailing list becomes more a matter of judgement than of chance, and it provides a guide to the way the follow-up should be planned and conducted.

Most dairymen who use sales letters successfully agree that the best way to start is to make a statement about what is wanted. The more specific this statement of aims is the more specific the results of the sales letter will be. Increasing the number of customers is a fine objective, but adding fifty new names to the route list is far better because it is specific.

MILK, MAELK, LAIT

MANY PEOPLES all over the world never heard of the cow, but they all drink milk: Reindeer milk is drunk in cold countries like Lapland. Llama milk is drunk in the mountains of Peru. Camel milk is drunk in Arabia. Sheeps' milk satisfies the Persian. The wandering Tartar tribes like the milk of the mare. Arabian desert dwellers like asses' milk. And goats are the poor man's cow in many European countries: Switzerland, Germany, Austria, Norway, France, Italy and Spain drinking the liquid by the millions of gallons.

With the goal established the next problem is writing the sales letter. Many milk plant owners shy away from this task. Writing a good sales letter may not be the easiest thing to do, but by following this list of "Dos" and "Don'ts" suggested by men in the dairy business who are suing direct mail with good results the task can be much easier:

Some Gimmicks to Remember

Do these things in writing a sales letter:

1. Write to the customer's interest at all times.
2. State the necessary facts simply and clearly.
3. Be brief.
4. Be forceful.
5. Be different.
6. Be Friendly.
7. Ask your customer to do something specific.

Don't do these things in writing a sales letter:

1. Use too many words.
2. Be trite.
3. Use high pressure.
4. Be flippant.
5. Don't brag – sell.
6. Don't be too sensational.
7. Don't end the letter going down hill.

Once written the next point to consider is how the sales letter will be reproduced. Sales letters that are individually typed naturally will get a good reception with the reader. However, the cost of this may be prohibitive if a large mailing list is to be used.

Before discarding the idea of having each letter reproduced on an individual basis one milk plant did some further investigation on the matter. He discovered a local lettershop that would produce the letters on an automatic typewriter at the nominal figure of only 3c a letter.

Sales letters that are duplicated can have individual headings inserted. If the duplication is carefully controlled the letters will appear to be individually written and the cost is much less. When no personal salutation is to be included printing may be less expensive and more attractive than some process of duplication.

Watch That Letterhead

Having selected the process of reproduction, the next problem is selecting the letterhead to be used. Many milk plant letterheads could be developed into strong sales stimulators on every piece of mail leaving the plant. A little thought and consulting a reliable printer can work miracles with a letterhead that is dull and lifeless at little extra expense to the dairy.

How will the sales letter be mailed? Will it travel first class? Will the one cent mailing get results? How about a post card mailing? Would postage saver envelopes be worthwhile?

XUM

Borden Farm Products

INSTALLS

Sharples

PRESUR-SEALD

MILK CLARIFIERS

Recently, the Borden Farm Products Company at Long Island City changed over from a holding to a short-time pasteurizing system. To complete the modernization program, two Sharples Presur-Seald Milk Clarifiers were selected for the required clarification process. Each clarifier delivers up to 22,000 pounds per hour at low maintenance and operating costs.

This is a typical example of the many installations of Sharples equipment which have been and are being made in the nation's foremost dairy plants. It attests to the operating efficiency and economies realized through the use of Sharples Clarifiers and Cream Separators.

THE NEW SHARPLES SUPER MILK CLARIFIER

This highly efficient clarifier is especially designed for the plant requiring capacities up to 4,000 pounds per hour, with all the refinements and clarifying efficiency of larger machines. Fully enclosed and stainless steel throughout. Write for Bulletin No. 1246 which gives complete description.

This photograph taken in the Borden Farm Products Company plant at Long Island City, New York, shows the actual installation of two Sharples Presur-Seald Milk Clarifiers.

SHARPLES PRESUR-SEALD CLARIFIERS AND SEPARATORS
—THE CHOICE OF LEADERS IN THE DAIRY INDUSTRY

SHARPLES

The Sharples Corporation

DAIRY EQUIPMENT DIVISION

New York 17, N. Y.	Chicago 4, Ill.	Boston 10, Mass.	San Francisco 5, Cal.	Cleveland 15, Ohio
501 Fifth Avenue	80 Jackson Boulevard	230 Congress Street	686 Howard Street	453 Hippodrome Annex Bldg.

EXECUTIVE OFFICES AND FACTORY, 2300 WESTMORELAND ST., PHILADELPHIA 40, PA.

Answers to these questions can best be determined by checking individual problems with the postmaster, the printer, or the local direct mail specialist. In some cases a 3c mailing would be a waste of money and in others the extra postage expense would pay handsome dividends.

Costs of direct mail can be held at an absolute minimum through the use of a one cent post card. Some authorities are of the opinion that these aren't read, but merely thrown away when received. To be absolutely sure it is recommended that a spot check be made of some offer on only one hundred post cards with some control to check the results before the idea is discarded completely.

One milk plant owner who was of the opinion that the government post cards weren't read was induced to try an experiment. He prepared the copy for the post card and about half way through the copy he mentioned an offer for a quart of ice cream on the presentation of the card at the dairy.

Results?

Within a week after the test mailing had been mailed he had delivered a quart of ice cream to 46% of the people who received cards. At the end of a month he had accumulated 63% of the cards sent out in this test campaign.

It is hard to throw away anything that comes in the mail without at least a glance. Getting a glance is almost assured in direct mail advertising – getting action depends on the copy, the presentation, and the offer.

Regardless of whether or not a dairy wants to get into the mail order business the method has a direct way of building business. The sales message goes direct . . . and the returns are direct to the sales record of the dairy.

●

FIGHT OLEO LAW DEADLINE

Colored oleomargarine will appear in Michigan stores and restaurants on Sept. 23 for the first time in 50 years if the new law is not blocked by the American Dairy association. The association is circulating petitions in an effort to suspend operation of the law permitting sale of colored oleo until it can be voted on at the November 1950 election.

The association needs 105,656 signatures. Charles Stone, Michigan secretary of the association, says he already has about 75,000. He is confident there will be enough by the Aug. 23 filing deadline.

The law permitting selling of colored oleo was one of the few made by the people themselves. It amends the 1899 act forbidding selling of all but uncolored oleo. The sale of colored oleo is permitted so long as it conforms to federal laws and regulations. A separate new state law, to take effect Sept. 23, also must be conformed to. Under that law, if oleo is served in restaurants, it must be served in triangular pieces. The restaurants serving it must so state in large signs and on menus. In addition, colored oleo may not be sold in stores unless it is clearly identified on the package.

The package must also bear in reasonably prominent type the name and address of the manufacturer, a list of all ingredients, and identification of the oil or fat used by the name of the animal or plant from which it is derived. The origin of the coloring and the amount and kind of preservative must also appear.

The oleo may not contain less than 80 per cent fat. It will be illegal for anyone to use certain words and phrases on oleo packages or in oleo advertising. Among these are "butter," "milk" (unless there is milk in the finished product), "cream," "fresh," "dairy," "farm" or any breed of cattle or any word associated with advertising dairy products.

●

FOOD REGULATION COURSE

Illinois Institute of Technology will offer a graduate course in food regulation and compliance beginning September 21, 1949, and running through January 25, 1950, it was announced by Milton E. Parker, director of Food Engineering and Technology.

Consisting of 16 two-hour lectures, the course has been organized and will be given by Albert I. Kegan, Counselor at Law, and lecturer in Patents and Copyrights at Northwestern University, Chicago.

The course, first of its kind at Illinois Tech, will outline the growth of governmental control, analyze the practical aspects of compliances regarding food regulation and the necessity of controls as well as demonstrate their enforcement.

"The course has been designed to provide the student with a working understanding of governmental regulation of foods and food processing, showing what constitutes compliance, legal and technological consequences of food standards, and the procedures followed in forming these standards", Parker said.

Graduate students in food technology (or the equivalent) and any qualified persons in the food processing industries are eligible to enroll in the course.

It may be taken with or without academic credit. Those seeking credit will be required to take a final examination. Lectures will begin at 6:10 p.m. Tuition is $35. Applications for registration should be sent to the Dean of the Graduate School, Illinois Institute of Technology, Technology Center, Chicago 16, Illinois.

Wheels of Imported Swiss Cheese

by Thelma A. Rose

THE RETURN of imported Swiss cheese to the United States will be the first in ten years. "It is coming," announces H. R. Buhlmann of Emmental, Switzerland who has been visiting Cleveland and other cities.

"This year Swiss cheese is off the Swiss ration list and is on its way to the United States."

The dairy herds were used for meat during the war and still in 1946 cows were needed there to build up their supply.

"The minerals in the earth, the kind of grass and other food cattle eat make the milk – and consequently the cheese tastes differently," so says Buhlmann.

He goes on to say that United States cannot duplicate Swiss cheese regardless that a good many of the producers of Swiss cheese, are of Swiss descent.

Buhlmann said, "In Emmental, the most fertile part of Switzerland, every village has its own rural cheese factory." His cheese-making firm has been in his family for many generations and will be handed down to his sons, he remarked. In a Swiss factory in one day about one wheel weighing 120 to 150 pounds is manufactured; this is a small portion to the output in our factories of United States.

A simple answer is given for the why holes in Swiss Cheeses? He says, "Young cheese loses much water by evaporation. The hollow spaces in the cheese are a consequence of the evaporation and are filled by gas produced by the fermentation."

The Swiss are very particular and highly successful in making cheese.

CAMPAIGNS FOR EDUCATION

The Minnesota Dairy Technology Society has launched a campaign to collect a fund to be used to finance worthy educational projects in the dairy field, with the money to be raised through the granting of associate memberships in the organization.

The goal is to raise $1,000 to $1,200 a year, and associate membership certificates will be issued to dairy product manufacturers and distributors, dairy equipment and supply firms and others directly interested in the welfare of the dairy industry in Minnesota.

The society is particularly interested in aiding dairy judging teams at the University of Minnesota, according to B. M. Zakariasen, chairman of the educational committee and head chemist and director of field services, Land O' Lakes Creameries, Inc.

Limited finances, he said, have hampered the efforts of the University of Minnesota Dairy Department to send adequately trained students to the annual National Dairy Show. The society believes that the dairy interests of Minnesota should recognize this situation and institute a permanent financial program to aid the teams.

With 340 members, the Minnesota Dairy Technology Society is the largest in the country.

●

WISCONSIN SHORT COURSE

Professor H. C. Jackson of the Department of Dairy Industry, University of Wisconsin has announced plans for a Dairy Short Course to be given at the university starting September 26 and finishing December 17, 1949.

Students taking this course may take either ice cream making and market milk, or buttermaking and cheesemaking. In addition to these subjects instruction will be given in Dairy Arithmetic, Dairy Bacteriology, Dairy Cattle Diseases, Dairy Mechanics, Dairy Sanitation, Marketing Milk Products, and Milk Composition and Tests.

For the first time since the war a limited number of non-resident students will be eligible to take the course.

●

C-B MOVES N. Y. C. BRANCH .

On Monday, August 8th, Cherry-Burrell's New York Branch completed the job of moving into a new office and warehouse building in Long Island City, located at 50-22 Twenty-third Street. In addition to providing four or five times more warehouse space than the former location, Cherry-Burrell's branch can be easily reached by car, truck or subway from any point in the Metropolitan New York area.

It is adjacent to several important through highways and the Queens Midtown Tunnel. The building is also on the direct vehicular route to Whitestone Bridge, Westchester and Connecticut. By subway, it takes only 5 minutes by the IRT from Grand Central Station to Hunter's Point subway station in Long Island City, which is about three blocks from the Cherry-Burrell Branch. The Independent subway station at Van Alst Avenue is only four blocks away. Ample free parking space is also available for cars and trucks.

Cherry-Burrell's greatly enlarged warehouse will permit stocking larger quantities of the day-to-day supply and maintenance items required by dairy and food products plants. Larger and more complete service facilities are also available.

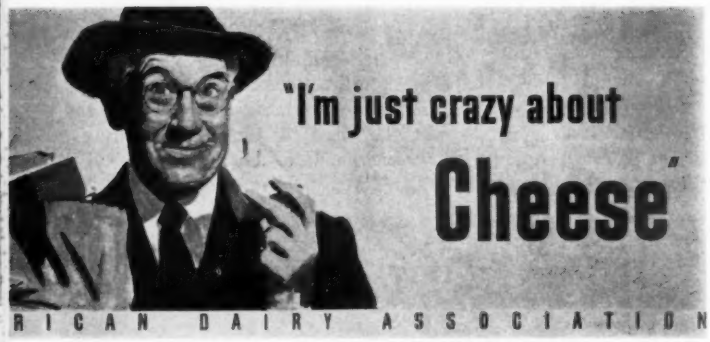
As soon as decorating is completed, B. F. Jakeman, Branch Manager, is planning to hold an Open House for customers in the New York area.

●

Storm Lake, Iowa

G. A. Rosenfeld, Buena Vista county extension director for the past five years, and an Iowa extension director for the past 21 years, is the new northwest Iowa fieldman for Dairy Genetics, Inc. of Des Moines, Iowa.

SANI Certified
Roll on to Greater Profits With a Greater Pay Load!
STORAGE TRANSPORT and PROCESSING EQUIPMENT
The answer is a Sani-Certified transport tank mounted on a light-weight high tensile alloy metal trailer chassis.
Pay load capacities of transport units can be increased up to 300 gallons more than possible with conventional structural steel chassis.
Profit by the many advantages of a standard trailer chassis with no more weight than so-called "frameless" units.
Write for Bulletin 821-A
OUR STANDARD PRODUCTS
STORAGE TANKS
TRAILER TANKS
TRUCK TANKS
CHEESE COOKERS
BALANCE TANKS
RECEIVING TANKS
WEIGH CANS
HOT WELLS
CREAM COOLERS
HOPPERS
ICE CREAM MIX TANKS
COLD WALL STORAGE TANKS
SPECIAL EQUIPMENT SERVICE
If you are in need of special equipment our engineering department can design this equipment to meet your specific requirements, or build from your own designs. Consult us—our engineers are always at your service.
Standard Designs or built to your Specifications
Details on request
STAINLESS & STEEL PRODUCTS CO.
1000 BERRY AVENUE
ST. PAUL 4 MINNESOTA



In these two posters Howard Scott, noted illustrator, has captured some of the taste thrill that results from eating top quality dairy products. These and other posters are part of the American Dairy Association's forth-coming advertising campaign.

ADA OPENS UP ON SALES WITH BOTH BARRELS

Tie In With National Magazines Plus Taste Appeal Approach Give Program Potent Punch

AMERICAN DAIRY ASSOCIATION's advertising committee has come up with an advertising program for the coming year that involves just about all of the top mediums of communication in the business. Look Magazine, Super Market Institute, Saturday Evening Post, Railway Express trucks are a few of the blue blooded message carriers that will bear the dairy industry message.

Milk comes in for a large sales push under the program. New angle to be used is taste appeal. "We are going to transform public need for milk into public want for milk" says ADA Advertising Committee.

Half Million Back of Cheese

Spearheading the industry's "parade of sales" will be the industry's Cheese Festival scheduled for October. It is estimated that more than half a million dollars in advertising will be invested in making the event October's big food push on the market front. Look Magazine, the Super Market Institute, the chain and independent food stores are mobilizing with the cheese industry in spreading the campaign to the four corners of the country. The appeal will be to the appetite; the objectives to stepping up cheese sales. Cooperation through related food organizations will be widespread.

Golden Touch for Butter

The sales-slanted activities on Butter will head the "parade of sales" in November. An appetite-tempting "Butter Makes the Difference" appeal will point the way to bringing back those "spread-on-the-butter days." Strong identification of butter's golden color and cream goodness will be featured in the advertising. The butter event in advertising coverage, merchandising push and related food cooperation will set a new selling pattern for butter.

The evaporated milk promotion scheduled for the holidays will be focused on the "Surprise Pie of the Year." Such related food advertisers as Baker's Cocoanut, Pillsbury and Libby's are relating their magazine, radio and newspaper advertising to the campaign.

Magic Six for Milk

"Milk is in for a new sales glorification," according to Owen M. Richards, general manager of the American Dairy Association. In elaborating on the milk campaign dated for December, he points out the development and advancement of the "Magic Six" in the visualization of milk to the millions. This new advertising note gives milk new sales appeal in A-B-C language that's certain to advance understanding that will transform "public need for milk" into "public want for milk."

BUDGET
AMERICAN DAIRY ASSOCIATION
1949 - 1950

ADVERTISING	$ 786,000.00
MERCHANDISING	60,000.00
RESEARCH	90,000.00
EDUCATION	84,000.00
MEMBERSHIP	65,000.00
PUBLICITY	60,000.00
ADMINISTRATION	70,000.00
TOTAL	$1,215,000.00

The media backbone of the 1949-1950 advertising campaign will be an interwoven combination of the nation's leading magazines and newspaper supplements. Included in the list to spread the goodness of dairy foods are the Saturday Evening Post, This Week, Look Magazine, the American Weekly, Ladies' Home Journal, McCall's and

In a shirt sleeve session members of the ADA advertising committee plan the campaign. From right to left they are C. R. Schoby, Iowa, chairman; Walter C. Moore, Colorado; A. P. Kelly, Arkansas; W. J. Murphy, North Dakota; W. J. Swayer, Illinois; Dale Stewart, Nebraska, A. E. Banks, Arizona; Fred Shure, Indiana.

Better Homes and Gardens. The inauguration of the new schedule gets underway in October. All advertising will be in full color with emphasis on the products of the dairy industry.

Supplementing the magazine schedule will be widespread use of colorful sales-creating 'Xpress posters. Here, too, a new advertising note will be introduced. Enlisting the talents of Howard Scott, America's outstanding human interest illustrator, ADA 'Xpress posters will visualize the goodness of dairy foods through registration in human expression. Such subjects as "You Just Know She Uses Butter;" "I'm Crazy About Cheese," and, "All This and Milk, Too" are keyed to the natural side of life in wanting to enjoy dairy foods. More than 6,000 'Xpress postings every other month will provide 360 million sales exclamations each thirty-day period.

$103,000 for Educational Work

In expanding the dairy industry's educational activities, the American Dairy Association allocated a total of $103,000 for projects through the National Dairy Council, the Evaporated Milk Association, the Milk Industry Foundation and the International Association of Ice Cream Manufacturers. Seventy-five thousand of the allocation is directed through the Dairy Council on a project basis as producer support of the educational program in matching funds for education activities with the processor, distributing, machinery and supply branches of the industry.

Upon recommendation of the membership committee, the executive group initiated a nationwide "grassroots study" to determine the advisability of changing the ADA Advertising Set-Aside to a year-round basis.

Delegates emphasized that a set-aside made at a smaller rate every month would: (1) Increase the efficiency of the advertising set-aside; (2) Permit a plant to join the movement at any time of the year; (3) Bring many of the "free riders" into the program, and, (4) Provide a more dependable basis for determining total income.

In the ADA research field it was announced that the long-awaited equipment for a study of milk sales through an automatic vending machine at Utah State Agricultural College is now available and the investigation is underway. On display, too, for the first time was the new ADA-developed "midget" size cheese cutter designed to advance the sales of prepackaged cheese in tens of thousands of stores where operations are on a smaller scale than in the super markets. The newly developed cheese cutters are now available and are being marketed to the retail trade.

Progress and results were reported on several long-time nutrition projects. The executive committee was informed of findings at Michigan State College which reveal that milk

"Better buy L-W your BEST buy"

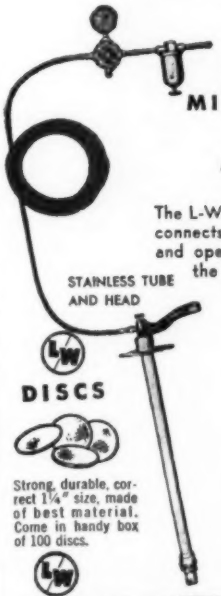
PATENTED

(RUST PROOF WHITE ENAMEL COVER—STANDARD EQUIPMENT)

L-W Mechanical Testers are recommended especially where large volume and accuracy—free from the possibility of human error—are essential.

MECHANICAL MILK SEDIMENT TESTER
MODEL "D"

This tested and approved product is serving in scores of plants throughout the country. Industry leaders like Armour, Swift, Wilson, Cudahy, Borden, Kraft, Pet, Carnation and hundreds of others, have been using the L-W Mechanical Tester for years. It is fully automatic . . . features a unique cut-off valve that assures 16 ounces every time. Note push-button control on handle and easy-to-read vacuum and pressure gauges.



AIR-VAC
MILK SEDIMENT TESTER
MODEL E
Air-Line Operated Model "E"
Stainless Tube and Head

The L-W Air-Vac air-line operated Milk Sediment Tester connects directly with any air line already installed and operates from your own compressor. Included in the many special features of this new product are

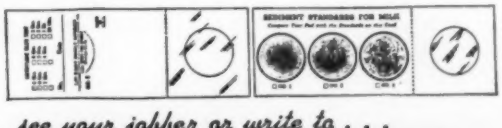
REGULATOR—properly pre-set at factory, eliminates any possibility of change in rate of intake by the operator, assuring constant uniformity.
DIAL INDICATOR—for quick, visual determination of proper operating pressure.
AIR FILTER—for clean air . . . prevents any condensation, rust or foreign matter from coming in contact with the milk or restricting normal, easy operation.
LIGHT WEIGHT—for easy handling, resulting in considerably less fatigue.
EASY OPERATION—comfortable handle, push-button control and light weight combine to make the L-W AIR-VAC a pleasure to work with. 20 feet of dairy hose make wide range of action possible.

PATENTED AND PATENT APPLIED FOR

DISCS

Strong, durable, correct 1¼" size, made of best material. Come in handy box of 100 discs.

CARDS
No. 5, front and back shown, ¼ actual size.



see your jobber or write to . . .

DAIRY SUPPLY DIVISION
THE LANGSENKAMP-WHEELER BRASS WORKS, INC.
1266 SHELBY STREET, INDIANAPOLIS 3, INDIANA

Strikes, Suits, and a Hornet's Nest

THE SUMMER brought hot weather, dry pastures and a threatened milk shortage in some areas. It also brought a certain amount of unrest that was reflected in the dairy industry by some bitter strikes, rows between companies, rows over the introduction of federal orders into areas that heretofore had not had them. At the Shawano Dairy Co-op in Shawano, Wisconsin pickets and police fought a pitched battle with rocks, clubs, and tear gas. In Gary, Indiana, American Federation of Labor Truck Drivers and Dairy Plant Workers demands for a flat ten dollar wage increase exploded into a brief two day strike. In Marion, Indiana, a strike at the Kroger Dairy Company brought on by the unrecognized local which was organized by the United Mine Workers reached the point where it was necessary to get an injunction restraining strikers from interfering of non-striking employees. In Chicago the Dean Milk Company filed suit for damages totalling $15,000,000 against seven other Chicago firms. Up in New England a move to bring a Federal Order into secondary markets stirred up a small hornet's nest, particularly in Rhode Island.

Reports of these happenings are printed on this page. All told it was quite a summer, quite a summer.

FUR FLIES IN SHAWANO

Beleaguered Co-op Keeps Plant Open As Patrons Swap Udders for Holding Tanks

Shawano, Wisconsin, was the scene of a bitter strike against the local Consolidated Badger Co-operative. In a walkout which began June 2, Local 507 of the AFL Dairy and Creamery Employe's Union demanded a 10 cent hourly wage boost and other benefits which they maintained were given to workers in the plants of nearby large dairy companies.

Bitterness and violence marked the dispute at its inception. Tear gas bombs were used by police in attempts to keep order at the plant while an unidentified person unsuccessfully tried to dynamite a railroad spur leading to the Shawano plant.

To keep up operations farmer members left their homes and work in the plant. The union placed ads in local papers alleging that George Rupple, co-op manager made $20,632 from an egg firm over his $14,000 yearly salary as manager. It is clearly apparent that the union's aim was to separate the farmers from their leader. From an informal poll of the farmers it was determined that they had not paid any attention to the union ads.

Marton Young, secretary-treasurer of Local 507 has called the co-op members strikebreakers, scabs, and former draft dodgers. But if his attacks on the farmers have been harsh his feelings toward the organization's officers is deeper.

Specific points which the union is demanding are (1) a ten cent hourly wage increase boosting the average pay from $1.10 to $1.20; (2) a ten cent an hour premium for night work (they now receive six cents); (3) six paid holidays a year and (4) time and a half for Sundays (straight time is paid now).

General feeling throughout the co-op was that with the milk price down and costs going up it just wouldn't be fair to give the workers an increase. Many farmers threatened to quit the co-op if the union demands were granted and as a result it now seems unlikely that these demands will be met, at least in full.

Since the strike began June 2, several pickets have been arrested for resisting officers assigned to the scene. In retaliation union officials filed a petition for an injunction against the county sheriff and the town police chief for allegedly taking sides in the dispute and disrupting orderly and legal picketing.

●

TWO DAY TIFT IN GARY

Truck Drivers and Plant Workers Settle For Seven and Eight Dollar Raises in Brief Flare-up

GARY, IND.—A two-day strike in Lake County resulted Aug. 16 in a $7 weekly pay increase for milk truck drivers and an $8 increase for dairy plant workers and office employes. The strikers, members of Local 835, AFL Milk Truck Drivers and Dairy Plant Workers, had demanded a flat $10 raise.

A. C. Stumpf, executive secretary of the Lake County Milk Dealers Association, said that the previous minimum scale for milk truck drivers was $67, while their average pay was $85 per week; the dairy plant and office workers' minimum rate was $55 and their average weekly pay was $70.

An estimated 320,000 consumers, chiefly in Gary, Hammond, Whiting, and East Chicago, were affected by the strike, which was termed a lockout by union officials.

Michael Sawachka, president of the joint teamsters council, of which Local 835 is a member, termed the situation "10 per cent strike and 90 per cent lockout." He blamed the dealers for the tieup, charging that most union members went to their jobs but were unable to go to work.

An emergency meeting was held immediately in Gary Labor Temple during which union leaders made plans to set up emergency milk depots in various parts of the county "so that babies could get their milk."

Mayor Eugene Swartz of Gary called for immediate discussions between the dairy operators and leaders of Local 835 to iron out difficulties. The result was a truce two days later, Aug. 10, following which the milk supply gradually returned to normal.

Negotiations were then resumed, and on Aug. 16 a new two-year contract was signed calling for the compromise raises in the pay scale. Approximately 300 employes of the 14 dairies were affected.

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DEAN SUES FOR $15,000,000

Chicago Firm Seeks Damages From Seven Other Milk Distributors In Price Fixing Row

By M. J. Parr

THE DEAN MILK COMPANY, Chicago, filed suit in federal district court July 21 charging seven other leading Chicago milk distributors with a conspiracy to fix retail milk prices in the Chicago area.

Named in the suit were the American Processing and Sales Co., Inc., the Borden, Bowman Dairy, Western United Dairy, Capital Dairy, Hunding Dairy, and Meadowmoor Dairy companies, and the National Tea Company, and John F. Cuneo, named in the suit as controlling stock holder of the American Processing and Sales Company and chairman of the board of the National Tea Company.

The suit asserts the Dean company has lost profits totalling $5,000,000 through the alleged conspiracy, and asks $15,000,000 damages. It requests the defendants be stopped from carrying out what it calls a "system of secret and illegal rebates."

Greenbank to Receive Award

A quarter-century uphill battle to establish powdered milk as an everyday food will be climaxed September 19 at Atlantic City, N. J., when Dr. George R. Greenbank of the United States Department of Agriculture receives the $1,000 Borden Award in the Chemistry of Milk during the 116th national meeting of the American Chemical Society.

The prize, which includes a gold medal, will be presented to Dr. Greenbank, a research chemist in the Agriculture Department's Bureau of Dairy Industry, by Professor Linus Pauling of the California Institute of Technology, president of the Society, at a general meeting in the Atlantic City Convention Hall. Dr. Greenbank's award address will be made during a symposium on the flavor of dairy products which will be conducted by the Division of Agricultural and Food Chemistry and over which Dr. Greenbank will preside.

The award, financed by the Borden Foundation and administered by the Society, was established "to recognize outstanding research in the chemistry of milk and dairy products, or fundamental research that contributes directly and materially to the knowledge of milk and dairy products."

Scorned by established manufacturers 25 years ago, the sale of powdered milk rose from a trickle to an annual flow of 700 million pounds, after Dr. Greenbank and his colleagues improved the quality of powdered milk and enabled it to compete with other forms of milk, particularly in commercial baking.

Dr. Greenbank is credited with discovering that proper heating of milk before drying improves the size and quality of the commercial bread loaf. His research showed for the first time that when milk was heated above pasteurization temperatures for 30 minutes the water binding capacity of the milk protein, a vital factor in the quality of commercial baking, was increased.

The Federal chemist was cited particularly for his work on the chemistry of milk fat as related to the keeping quality of dried whole milk and the flavor of milk. He showed that heat—instead of enzymes—plays the chief part in determining and controlling the flavor of milk. Dr. Greenbank has also conducted extensive research on the maintenance of the quality of butterfat, and fat in food products.

Dr. Greenbank, who will return from the International Dairy Congress in Sweden after presenting a paper there to accept the Borden Award, was born in Woodsfield, Ohio, in 1892. He received the A.B. degree from Ohio State University in 1917 and the Ph.D. from American University in 1930. He also studied at Johns Hopkins University and the Massachusetts Institute of Technology. After serving in the Chemical Warfare Service he joined the Department of Agriculture in 1922.

●

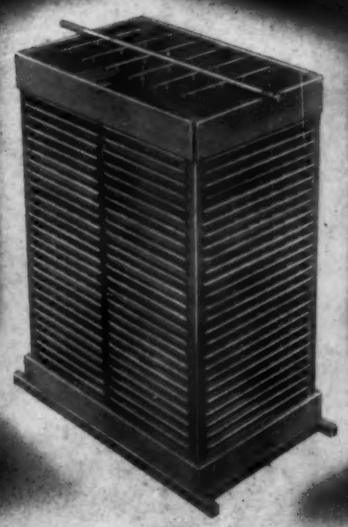
Bay State School Lunches

Massachusetts farmers and food dealers have a good customer in the State's school lunch program, according to preliminary figures for the 1948-49 school year compiled by the U. S. Department of Agriculture.

Local expenditures by Massachusetts public schools participating in the National School Lunch Program are estimated at better than $4,470,000 for food alone. In addition, nearly 16 million pounds of farm products were distributed in the State by U. S. D. A.

The lunch program, administered locally by the Massachusetts Department of Education and nationally by the Production and Marketing Administration, served 203,069 Massachusetts youngsters in the peak month of the school year just ended, with 1613 schools participating. Peak participation in the previous year was about 192,000 children in some 1500 schools. Nationally, the program reaches nearly 7 million pupils.

SPECIFY MARLEY
Series 100
FOR
SPRAY TOWER ECONOMY



For a water cooling tower that

Can be shipped immediately from stock
Is completely prefabricated
Has complete erection, operation and maintenance instructions
Is simple to operate
Uses patented Marley Spray Nozzles
Has a balanced spray system
Assures a minimum drift loss
Is made of California Heart Quality Redwood
Has a heavy steel basin plate and galvanized hardware
Is accurately sized with rating data
Has no nails or similar metallic fasteners
Features machined louver posts and slip fit louvers
Is fully backed by the Marley guarantee

Your best buy is the MARLEY SERIES 100 NATURAL DRAFT COOLING TOWER

Ask for a MARLEY Factory-Trained APPLICATION ENGINEER to tell you how the Series 100 will help YOU solve your water cooling problems. We're ready to help you.

MARLEY COOLING TOWERS

THE MARLEY COMPANY, INC.
Kansas City 15, Kansas

With new refrigerated units delivery truck drivers take their loads out without waiting for the products to be iced.

Provision has been made for the accommodation of a wide variety of bottle sizes. Total capacity of this unit is thirty-six crates.

REFRIGERATED UNITS FOR TRUCKS IS COST REDUCER

By John Hubel

No Need To Ice Up, No Need To Unload Extras Is the Word from Mar-Vel Dairy Where Cabinets Are Used on the Route

A REFRIGERATION unit, which permits loading of milk trucks at night for next day's delivery, is in use by the Mar-Vel Dairy Company, Chicago, on 20 of its delivery trucks. A year ago one unit was purchased and installed, in order to get a year's experience with this method of refrigeration, after which 19 additional units were installed in as many of the company's trucks. In discussing this method of refrigeration, Mr. Sarro of the dairy company said: "With the use of these units we had no frozen milk during below zero weather last winter. The units were loaded on our trucks the previous day and stood outside for the whole 24 hour period. All sour milk complaints have been eliminated with the use of these refrigerated units, and we have had no spoilage due to weather conditions—hot or cold."

The temperature at which the milk is kept in the Mar-Vel delivery trucks is 40 degrees F. Before the units were installed on the trucks, Sarro says, the milk was delivered in panel trucks, which were uninsulated, and the product was iced on the top case. In addition to keeping the milk at low temperature, the truck drivers say, delivery is made much easier for them, as the trucks are ready with their loads when the men get to the milk depot in the morning, without any waiting around before the load is ready to take out.

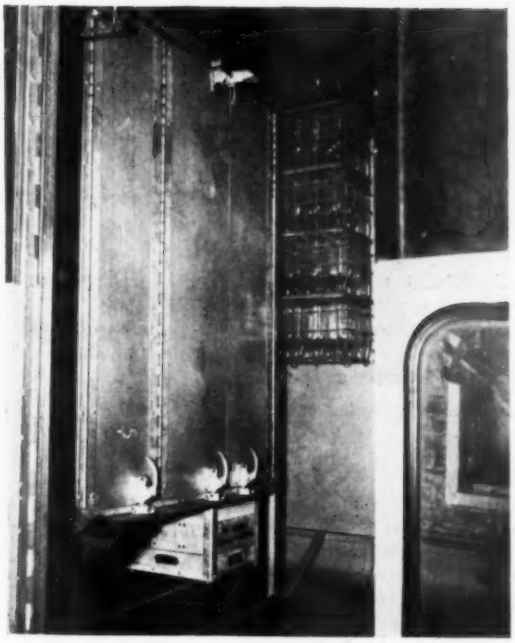
The management says that dairy distribution is made in a more efficient manner, as costs are materially reduced with the use of the units. Unsold products brought in at the end of the trip need not be taken from the truck, as the milk is allowed to remain on the truck, so that checking-in of milk left over from a route is eliminated, as well as the necessity of doing the same work in removing the cases from a cooler and again checking them out the next day. The hold-over milk is removed from the cabinet the next day o nthe route and delivered first in the morning. Such a short cut method of milk handling, says one of the drivers, means quicker loading, less book work and faster delivery. The men like it, and would not want to go back to the old method, Sarro declared.

The Mar-Vel Dairy Company uses the 36-case type of the cabinets, the unit being set in the center of the truck, forming a refrigerated body. The empty cases from this cabinet are not returned to the inside of the refrigerated unit, but are placed on the long racks on the wheel guard along the sides of the truck. This size unit is made to carry 12 cases to the section and therefore maintains a great amount of refrigeration which would otherwise be completely lost if the body of the truck were not insulated.

The trouble with condensation is eliminated, as there is a vapor seal between the outer cabinet and the insulation of the unit. The milk cases slide on steel supports, which permits free circulation of cold air under the bottom cases.

The installation of the cabinets on 20 of the Mar-Vel Dairy trucks in Chicago has made this depot a show place, as many other dairy managers are interested in the way the leftover milk can be left in the trucks at night, eliminating re-handling of the cases.

Position of units in relation to the routeman is shown here. Careful planning has eliminated any awkward reaching.



Units are built to hold crates three wide and four high. Empty crates are carried at the side or under roof.

Tightly closed refrigerated units keep milk and other dairy products at correct temperature during course of entire trip.

Units are so constructed that moving milk crates in and out is a simple matter for the routeman.

STUDY IN PLANT OPERATIONS

A Report of the

New York State Temporary Commission on Agriculture

THE GENERAL FUNCTION of a typical pasteurizing and bottling plant is to convert the raw milk and cream received from country plants into pasteurized milk and cream products in a variety of containers ready for distribution to home and store customers.

There are six major operations performed in a typical plant.

Receiving and Storing

The raw milk from the country plants which comes into the city in tank trucks or tank cars is pumped from the vehicle into storage tanks preparatory to pasteurizing. In some dairies, it is weighed in the vehicle before transfer to the storage tanks. In other dairies, it is pumped into a weigh tank where the weight is recorded. In still other dairy operations, no record of the weight is made at this point.

Pasteurizing

The milk is pumped from storage tanks through pasteurizers, either of the tank type or the short-time type. It is cooled after pasteurizing and is pumped into holding tanks preparatory to bottling.

Homogenizing

That portion of the pasteurized milk which is to be homogenized is forced through jets under high pressure to break up the fat globules and diffuse them evenly through the milk. The homogenizer is linked into the pasteurizing cycle so that milk can either be passed through or around it.

Bottling

The bottling operation starts with the washing of the empty bottles returned from the routes. This operation consists of placing empty bottles in the receiving end of a bottle washing machine, in which they are scrubbed and sterilized. They then pass through the bottle filling machine where they are filled with pasteurized milk. They continue by conveyor belt through capping and hooding machines where the closures are put on, and then to the casing-in operation, where they are removed from the conveyor and placed in cases.

Most dairies bottle homogenized and plain milk in both approved and premium grades. The containers used include 1-quart and 2-quart glass bottles for home delivery, 1-quart glass bottles and 1-quart paper containers for store distribution, and half-pint containers in both glass and paper. No half-pint containers of milk are distributed to homes and very few to stores. Most of these packages are sold to hotels and restaurants. An insignificant number of pints are produced by some dairies.

Empty Bottle Storage

The empty bottle storage operation consists of receiving cases of empty bottles and empty container cases from route trucks. These cases are stacked in the empty bottle storage area where broken bottles and foreign material are removed. The cases are placed on conveyors going to the bottling operation when required. Empty paper containers pass through somewhat similar operations.

Cooler and Platform

Full cases coming from the filling machines are stacked in the cooler where they remain until loaded to route trucks for delivery. In some plants, the loading of certain products is synchronized with the filling operation, in which case these products pass directly to the trucks without being stacked in the cooler. Products which are temporarily stored in the cooler are later placed on conveyors and carried to the platform where they are checked against the route order and loaded to route trucks.

Kinds of Labor Required

In each of these operations there is some labor required for actually handling the product or in attending to the equipment used in processing the milk. Generally speaking, the amount of labor required for these productive operations should increase or decrease as the volume of products increases or decreases.

In receiving and storing, pasteurizing, and Homogenizing, the number of fluid quarts handled is the primary factor in determining the labor required for the process.

In the bottling operation, the unit handled is a package. Different packages are filled at different bottling speeds. The labor required for the bottling operation is dependent on the number of each type of bottle filled, the bottling speed for each package and the number of men required to staff the operation. For a given bottling operation, this labor should increase or decrease in direct proportion to the number of packages filled.

In empty bottle storage and in the cooler and platform, the unit handled is the case. The handling of a case of 12 glass quarts takes about as much time as the handling of a case of 20 paper containers. The cooler and platform labor required for handling is, therefore, dependent upon the number of cases handled.

In addition to the labor required for physical handling or control of the product, there are other jobs which bear no relation to the volume. For example, all equipment which comes into contact with milk must be disassembled, scrubbed, sterilized and reassembled after every day's operation and the work areas washed down. This must be done once each day regardless of whether one thousand quarts or ten thousand quarts have been pasteurized and bottled. This is a "per day" job. "Per day" labor is also required to change over from the bottling of quarts, for example, to the bottling of half-pints. The amount of this labor depends on the number of changes required during the day.

Some of this fixed labor occurs in each of the operations. The most important part of it, however, takes place in receiving and storing, pasteurizing and bottling where the amount of equipment requiring clean-up far exceeds that in the empty bottle storage and in the cooler and platform.

Expenses

In addition to the costs created by labor, each operation in a bottling plant incurs expenses for items such as the following:

Supervision and Clerical Salaries
Porters and Janitors
Maintenance and Repairs on Equipment
Laundry
Building Depreciation
Taxes and Insurance
Electric Power
Fuel
Depreciation on Equipment

This is a partial list for illustrative purposes. Some of these expenses are incurred specifically and exclusively in certain operations. Others are created by the operation of the plant as a whole and must be distributed to individual operations.

Method of Study

Labor Costs

The labor described in the foregoing paragraphs was measured by time study and by observation of the labor complements required in each operation. These observations were made during actual operation of the plant.

On the basis of these studies, normal times were developed for each job performed in the plant. For example, in receiving and storing and in pasteurizing the time required to process a given number of quarts of fluid milk was determined, in terms of man hours per quart. The daily amount of labor required in cleaning the individual pieces of equipment was determined by time study. On the basis of a year's requirement of labor and a year's volume of quarts pasteurized, these labor hours were allocated equally to all quarts.

In the bottling department the labor required for handling the product and operating the equipment was determined in a similar manner for each type of product and package bottled. The clean-up time required for the year was then apportioned over all units bottled in proportion to the direct labor required for each.

In empty bottle storage and in the cooler and platform, similar cost techniques were used with the difference that in these centers the number of cases handled was the basis for cost determination. The cost of each type of package was determined by dividing the case cost by the number of packages per case.

These calculations determined the hours of labor required for each package in each operation in the plant and, by addition, the total plant labor hours for each package.

These hourly rates for each package were extended by the volume of each product package produced for the most recent twelve months period, and the hours were totalled. These total hours were then compared with the actual hours of direct labor shown in the company's records.

Not all of the actual labor was accounted for by the extension of the product hourly rates. The differences, however, were found to be within the normal range for ordinary rest and delay encountered in such plants. This rest and delay time was added to the developed hourly rates for each package. The final resulting hourly figures for each product when extended by the quantity of products produced during the year accounted for all of the actual labor spent in the plant.

The money cost for one hour of direct labor was determined by dividing the total direct labor payroll including overtime pay by the actual hours worked for the twelve month period. The labor cost for each product package was determined by multiplying the labor hours required to produce the package by the dollar cost per labor hour.

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Expense Costs

The actual expenses incurred in the operation of the plant for a twelve month period were determined from the expense ledgers or trial balances of the individual companies.

Each of these expenses was analyzed to determine its content and each was distributed to the operations of the plant on a logical basis. For example, the salaries of supervision were distributed according to where the supervision actually was required except for general plant supervision which was distributed on the basis of direct labor hours.

Building costs such as depreciation, taxes and insurance were distributed in proportion to the measured productive floor space of each operation.

The electric power required for processing was distributed on the basis of the calculated horse power hours required for the various motors and electrical equipment in each operation. The power required for heating and lighting was distributed in proportion to productive floor space.

These illustrations do not include all of the distribution methods used but do illustrate the technique involved.

The total expense cost of each operation was then distributed to the products handled in the operation in proportion to the time required for each product.

Container Costs

The cost of the containers for milk includes the cost of the bottle or the paper container, the cap and the hood and the case.

Glass bottle costs were determined on the basis of the average purchase price and the average number of trips made by each type of bottle.

Paper containers were costed at the average 12-month purchase price for the same period plus a percentage for containers lost and damaged. A cost for caps and hoods was determined in the same way. The cost of cases was based on purchase price and trippage, where this information was available, or upon the depreciation charged for such cases, plus the repair costs incurred.

Container and case costs were taken for the particular 12-month period studied for each company.

Explanation of Differences

Tables 1 through 8 reveal significant differences between companies in the total labor and expense required for their major products.

There are three factors which account for most of the differences in cost:

1. *Bottling Speeds and Labor Complements*

The rated speed of most bottle filling machines is about 120 bottles per minute. In actual operation the speed setting is frequently reduced and in addition break-downs, stoppages and the loss of individual containers further reduce the output. The actual output for filling one-quart glass bottles ranged from 80 bottles per minute to 106 bottles per minute. In all of these cases, the manufacturer's rated speed for bottle filling was 120 per minute or more. The actual output of bottling operations filling one-quart paper containers ranged from 71 per minute to 104 per minute.

The number of men required to staff a one-quart glass bottling line varied from three and three-quarters men per line to eight men per line. This complement of men includes feeding the washer, operating the bottle washer, operating filling, capping and hooding machines, placing packages in cases and cleaning up the equipment after operation. Some operators split their time between two lines. Also the clean-up time required is split among a number of bottling lines. These two facts account for the fractional men per bottling line. A low bottling speed which tends to create high cost is not always counterbalanced by a smaller complement of men. For example, one company operating a one-quart glass bottling line at an effective speed of 85 bottles per minute required 8 men to staff the line, while another company operating at an effective speed of 110 bottles per minute required only 4.6 men to staff the line. These differences are in some cases due to old equipment or to inefficient layout and arrangement of machines. In other cases, however, there was no apparent reason inherent in the equipment or the layout, for the low output.

"Try again, darling. Mama's not too crazy about this one either!"

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2. *Physical Arrangement of Departments and Equipment*

The arrangement of departments in relation to each other and the placing of equipment within departments creates differences in the number of men required for similar operations. For example, in the receiving and storing of raw milk, one company requires only two men to transfer the milk from the tank truck to the storage tanks within the plant. Another company with three times the volume of milk received daily requires six times the number of men for this same function. These differences are due primarily to the relative location of storage tanks, weigh tanks and the receiving points for the raw milk. This difference is further affected by whether milk is received by truck only or by both truck and rail and by the fact that some dairies weigh the milk in the tank truck or car, some weigh it in storage tanks inside the plant and some do not weigh it. In bottle and container filling operations, the arrangement of the bottling lines makes it possible in some dairies for one operator to provide the same services for two lines simultaneously. For example, if bottling lines are efficiently located, it is sometimes possible for one man to operate the filling, capping and hooding machines for two lines at the same time.

Differences in bottle washing equipment also create differences in staff complement. Some bottle washers can be operated with only one man while others require two. The arrangement of facilities is especially significant in loading and unloading route trucks.

The number of loading stations on the platform for wholesale trucks is as high as 15 for one of the companies studied and is low as 3 for another company studied. Since each of these stations must be manned, there is a significant difference in the number of employees required for the loading function. This number of employees ranges from a high of 47 to a low of 9.

Some of these differences are, of course, due to differences in the total volume of products loaded to trucks in a day. However, a company having 5 loading positions manned by 9 operators was able to load almost 4 times as many cases and cans per operator than a company having 15 loading positions and 47 operators. Of these two companies, the one with the higher output per operator handled 42 different product packages while the company with the smaller output per operator handled only 29 different product packages.

It would appear from these comparisons that plant layout and the arrangement of facilities was a more important factor in cost differences than either differences in volume or differences in the variety of packages handled.

3. *Labor Productivity*

Although many of the differences in cost are explainable by physical differences in layout and in equipment, there still remain some points of difference which cannot be attributed to physical factors.

As an example of differences in labor productivity, one company filling one-quart bottles at a rate of 106 bottles per minute required two men to place the bottles in the cases while another company filling bottles at a rate of 110 per minute required only one man for the same operation with comparable equipment.

Differences in labor productivity are more pronounced in the clean-up operations for various types of equipment.

The following tabulation shows the man minutes required for cleaning similar pieces of equipment:

Equipment	Co. 1	Co. 2	Co. 3	Co. 4	Range In Mins.
Storage Tanks					
Time In Minutes	64	41	21	30	43
Size of Tank	4,300 Gal.	7,000 Gal.	3,500 Gal.	4,000 Gal.	
Short Time Pasteurizer					
Time In Minutes	309*	368	61*	282*	248*
Pounds Per Hour6	20,000*	20,000	33,000	20,000	
Homogenizer					
Time In Minutes	117*	62	34*	90*	83
Clarifiers					
Time In Minutes	252	137	46	94	206
Bottle Filler					
Time In Minutes	196	328	153	138	190
Paper Container Filler					
Time In Minutes	247	167	88	71	176

* Does not include sanitary lines.

There are undoubtedly many underlying reasons for differences such as these in the productivity of labor. This study has made no attempt to discover or define these reasons.

It has been observed, however, that some companies develop a greater degree of division of labor than others. In some dairy operations, employees are classified as to specific jobs and do only those jobs. In other companies, the duties of the employees are more general and cover a wide range of activity which permits them to use their time more effectively.

●

Cow's milk isn't drunk in Mexico; instead they prefer that of the goat. Every family's got one, and, if there's a surplus, the boys of the family drive the animals through the streets and milk them on order.

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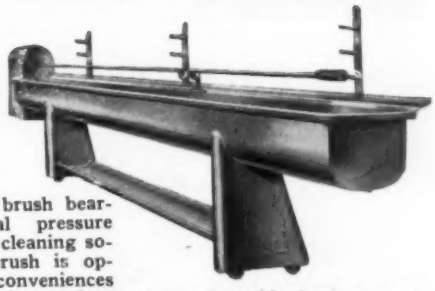

Designed for quick and thorough power washing of sanitary pipes. Equipped with standard ¼ h. p. motor, V-belt drive, and brass brush bearings. Centrifugal pressure pump for driving cleaning solution through brush is optional. Many conveniences such as pipe drying and storage rack; wide back apron; covered drive mechanism; correct working height; wood roller pipe rest. Ball bearing casters provide easy portability. Half-round 14 gauge galvanized tank 11½" deep and 11½" wide; 6' to 12' long. All welded construction; built for heavy duty service. Save cleaning time and labor with this modern Stoelting pipe washing equipment.

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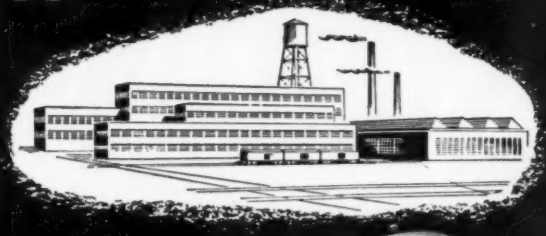
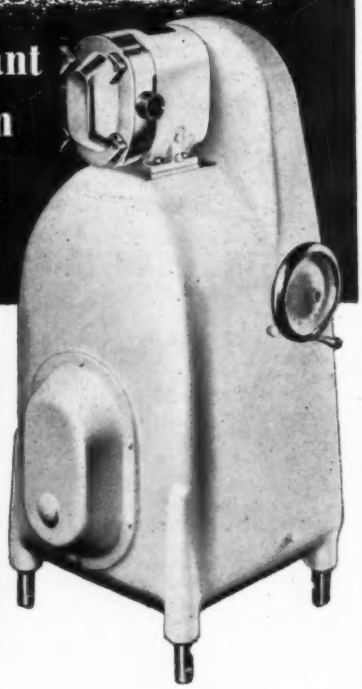


an Important Name in an Important Industry



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Waukesha 100% SANITARY PUMP

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Sherbet From Cheese Whey

A successful method of making sherbets from cheese whey, in which whey solids are used to replace the nonfat milk solids that are normally used, has been announced by the U. S. Department of Agriculture.

The new method was developed by the Bureau of Dairy Industry as one phase of a comprehensive study designed to increase the use of various dairy byproducts in human foods. Funds for the research were supplied through the Research and Marketing Act.

Compare Favorably with Milk

In the sherbet experiments, dairy manufacturing technologists F. E. Potter and D. H. Williams tested fresh fluid whey, sweetened condensed whey, plain condensed whey, and dried whey. All the experimental sherbets compared favorably in body and texture with sherbets made from milk, and there was no characteristic whey flavor in the frozen product when good-quality whey was used. Also, the whey sherbets were smoother and more refreshing in taste. There was little or no difference in the calculated calorie content of the milk and whey sherbets.

The dairy researchers discovered that whey has several advantages over milk. It is easier to incorporate air into the whey "mix," thereby imparting a more desirable body and texture to the sherbet. This is particularly true when sherbets are frozen in a continuous-type freezer.

Another advantage of whey over milk is its non-curdling properties, due to the absence of casein in the whey. Citric acid is usually added to sherbets to give them an acceptable flavor and tartness. The acid tends to coagulate the casein in the milk sherbets, but the whey sherbets, lacking casein, do not curdle when the acid is added.

In tests to determine whipping properties of the whey "mixes," some of those made without butterfat produced an excessive overrun; this was corrected by adding as little as 0.6 percent of butterfat, and the addition of 1 percent of butter fat produced a sherbet of excellent physical characteristics. Overrun is the percentage of volume increase of a definite amount of "mix" during freezing, and is essential for a tasty and balanced sherbet.

Would Help Whey Surplus

Adoption of the Bureau of Dairy Industry's process by sherbet makers may help solve the problem of efficiently utilizing the billions of pounds of whey produced annually in this country. Whey is a nutritious food and contains about half the solids content of the milk from which it comes. But because of the perishable nature of whey and the lack of knowledge on how to use it, most of the whey has been fed to farm animals or discarded from cheese factories. Limited amounts of whey, however, are being used now in baby foods, confections, bakery goods, soups, and some is dried and exported. In 1947, 12 billion pounds of whey was produced in this country and an estimated 75 percent of it was either fed to farm animals or wasted.

Could Use Fresh Fluid Whey

Whey resulting from the manufacture of cheddar, Swiss, or cottage cheese can be used with equal success. Sherbet makers in the cheese-producing areas, particularly where cottage cheese is made, would be in a position to use the whey in its fresh fluid form. Cottage cheese is made predominantly in or near metropolitan areas — areas where the demand for sherbet is heaviest. And it is also in these same areas that most of the cottage cheese whey is discarded. Another point in favor of using cottage cheese whey is its high acid content,

which reduces the need for citric acid and saves about 10 cents per 100 pounds of sherbet "mix," at current prices.

However, cheese manufacturers in the dominant cheese-producing States could produce a non-perishable whey concentrate for shipment to sherbet makers in distant or more densely populated areas. Several years ago the Bureau of Dairy Industry developed a process for the manufacture of sweetened condensed whey, which is a simple and inexpensive way to preserve whey solids for future use in food products.

•

Cheese Bar Makes Hit

FINE, NATURAL WISCONSIN cheese is featured in the popular Allis-Chalmers "Cheese Bar" put up at the company's headquarters during conventions and trade shows.

The Cheese Bar consists of a table offering a variety of well-known cheeses, including Kaukauna Klub, Swiss, American

Here are the makin's and fixin's for the popular Allis-Chalmers Co. Cheese Bar. The double-walled, insulated aluminum chest is shown with trays, cutting and serving gadgets, and generous supplies of cheese. The large Kaukauna Klub links are used to refill the crocks, each marked with its own flavor.

and Brick, as well as other varieties which may be popular in the particular community where the convention is held.

The American, Swiss and Brick cheese is served on composition cutting boards with a wide variety of wire cutting knives, scoops and novel spreaders to make it easy for delegates to serve themselves. Crackers and liquid refreshments are also provided.

The Kaukauna Klub Cheese Foods are offered in the familiar stone crocks. Each crock carries the "A-C" (Allis-Chalmers) label and is also marked with the Kaukauna Klub flavor, such as American, Hickory Smoked, Garlic of Port Wine. They are refilled from the 4-lb. links prepared by South Kaukauna Dairy for the commercial trade.

These natural cheese foods are kept at their best by shipping in an insulated, aluminum refrigerated case designed by the Allis-Chalmers Co. This is built in the form of a suitcase, light and compact, with a compartment for the serving utensils needed. The entire unit is shipped by air freight to the convention site.

The Allis-Chalmers Co. Cheese Bar is always one of the most popular places at conventions. It not only builds goodwill for the company, but many a convention delegate carries home a taste for really fine natural cheese.

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DR. ROBERT F. HOLLAND

Problems of the Industry

DR. JAMES C. WHITE

Dr. Robert F. Holland and Dr. James C. White, both of the Department of Dairy Industry at Cornell University, conduct their question and answer column each month in the "Review". Questions should be addressed to either Dr. White or Dr. Holland, Department of Dairy Industry, Stocking Hall, Cornell University, Ithaca, N. Y.

●

Keeping Quality of Clarified Milk

QUESTION — I have heard it reported that clarification of milk removes sediment and bacteria. If this is so, does clarified milk have better keeping quality than the unclarified milk from which it came?

A. N. Y., Kentucky

ANSWER — Although considerable numbers of bacteria are removed by clarification, the keeping quality is not improved. A number of workers have studied this and all have shown that clarified milk sours just as rapidly as the corresponding unclarified milk. In some instances it has been reported that the clarified milk sours even faster, perhaps due to the breaking up of clusters of bacteria or the removal of growth-inhibiting factors with the sediment.

Bacteria differ in size, density and their tendency to form clusters, and as a result clarification may tend to remove one type of bacteria and leave other types. A few investigators have reported that the numbers of many disease-producing organisms are greatly reduced by clarification, also that clarified milk will generally sour while the milk from which it was made may spoil by putrefaction. This is of special interest to the cheese industry but it is questionable whether the selective action is apparent in the pasteurized product or is of any importance.

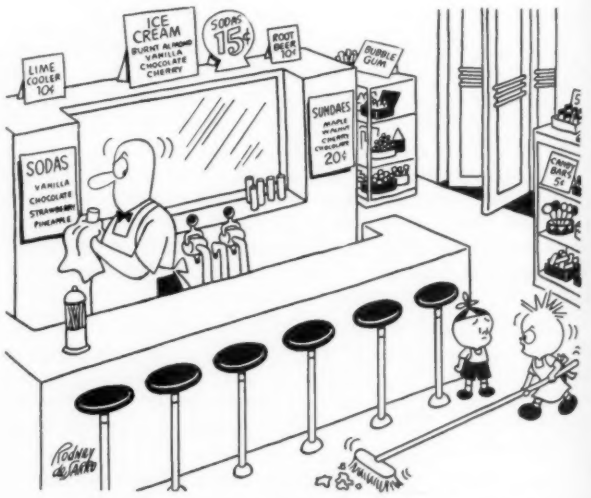
Babcock Testing

QUESTION — Why can't the butter fat be determined on a weight basis? That is fat weighs less when under water than a solid according to Life Magazine. Why couldn't a small sample of milk be put in a container covered and put under water and the results read directly on a cheap type of balance scales? If this could be done it would save a lot of acid and burnt fingers.

G. D., New York

ANSWER — You are right when you say that butter fat has a different weight under water than it has in the air. This was known to Archimedes, and developed further by Gallileo when he invented his hydrostatic scales for the determination of the purity of alloys. It would be a simple problem to determine the percentage of fat in milk by this method if the fat were suspended in a material of known specific gravity, but milk consists of fat plus skim milk and the skim milk is variable in composition. It contains sugar, proteins, ash, and a whole host of minor ingredients dissolved or suspended in water. As the fat content of milk varies from cow to cow and from milking to milking, so does the content of the skim-milk constituents. Because these vary, the specific gravity of the skim milk will vary and, therefore, your proposed method will not work. If fat were suspended only in water, it would save a good many burned fingers.

A new method is being developed for the determination of butter fat using only a wetting agent and centrifugation. This is a much more promising way to eliminate the present unwieldy Babcock procedure. There are high hopes that the method will be usable in the near future.



"I like the work, but I hate the short hours!"

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Selling Slants

Personal Magnetism — What Is It?

***By* FRANK W. GRAY**

WE HAVE ALL heard of personal magnetism — that indefinable quality in a man or woman which attracts immediate attention and respect from other people.

It is generally supposed that the quality of personal magnetism is inborn, that some people just naturally have it, while others don't. This is not necessarily true—personal magnetism can be developed. It is extremely important for the man who makes his living by selling to pay attention to the elements of magnetic personality.

One of the basic requirements is health and physical appearance. Animal vitality in itself will attract people to you. Physical sternath is the basis of courage and self-reliance. When you are strong and healthy you can more readily radiate hope and cheer and optimism, and this power exerts an influence in all human relations. With this in mind, the salesman should consider the subject of diet, exercise, sleep, relaxation, fresh air, deep breathing—everything which contributes to physical well being.

The next important element of personal magnetism is mental attitude. If a man enjoys his work, he can't help feeling more confidence in himself, and confidence is contagious. You enjoy doing what you do well. Therefore, try consistently to improve your understanding of people, your mastery of situations, your method of speaking, and your knowledge of selling technique. If your efforts are sincere, progress will be discernable by yourself and noticed by other people. Your mental attitude will be more self-assured. People always gravitate toward the man who is sure of himself.

A by-product of self-assurance is poise. The highly magnetic man is easy of approach, slow to express judgment, quick to praise, and can readily adapt himself to any circumstances. He knows how to say the appropriate word, how to put himself in the other man's place, how to bestow favtors. He is a good listener, and a diplomat in the right sense. His mastery of himself is such that his equilibrium is not easily disturbed. The quality of poise makes men eligible socially as well as in all business contacts. And it can be easily acquired.

The last important element is reserve strength and energy. We always have the feeling in the presence of magnetic people that they have excess vitality, unused strength. Many people expend themselves uselessly and aimlessly. They worry about what cannot be helped, they burn up energy in a thousand ineffectual ways every day. Avoid all waste motions for a single day, and observe the result for yourself. Plan your time, make every appointment count, look for the large values in life, and you won't get tired so easily.

Last of all, stay on the positive side. Avoid all negative thoughts and expressions. Do these things, and you will be surprised how much better you feel, how much better you look, and how much better you sell.

BOYS! WE CAN'T AFFORD TO TAKE SUCH CHANCES

When we see 19 men in the Dairy Industry **SENT TO JAIL** for a violation of the Food and Drug Law, **IT'S TIME FOR SERIOUS THINKING.** That's why we supply our Producers with those Accuracy Attested —

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and have every cow producing Milk for us tested for Mastitis. That Extra degree of care sort of **puts the Law on our side** and gives us an added assurance of safety for our product. It surely pays big dividends. **AND IT DOESN'T COST US A PENNY.**

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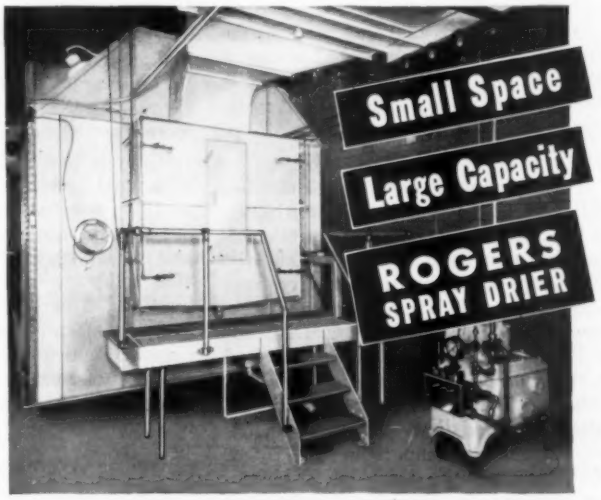

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By C. M. MINTHORN
Chester Dairy Supply Company
Chester, Pennsylvania

THE PASTEURIZATION of ice cream mixes by the short time high temperature method has much to recommend it to the ice cream manufacturer. From a board of health point of view it can be demonstrated that the method is safe and sanitary. From the operators point of view the method offers a practical, economical method of pasteurizing which results in a better product.

In the latter part of 1929 and the early part of 1930, the Pennsylvania Department of Health made an exhaustive study of the high temperature-short time pasturizing process as it applied to fluid milk with the result that it was found to be a safe method of pasteurizing, and, in the years since, has been accepted as one of the best methods of pasteurizing milk because of the positive time and temperature control as well as economy of operation and economy of space.

The equipment available at that time did not lend itself to the pasteurization of ice cream mix. However, certain advantages that were to be gained by the high temperature-short time method were recognized as evidenced by a paper prepared in 1931 by Professor C. D. Dahle of Pennsylvania State College published in the *Journal of Agricultural Research*, Volume 42, No. 10, on May 15th because he stated that "the processing of ice cream mix at temperatures of 170° or 180° decreased the degree of fat clumping, reduced the viscosity and freezing time, and increased protein stability." He also found that there was considerable advantage in homogenizing at high temperatures and recommended if possible a continuous arrangement. Now equipment has been developed that will process ice cream mix by the high temperature-short time method and produce the type of mixed described above.

Sixteen years later, in 1947, the ice cream industry took another forward step and installed the first complete high temperature-short time pasteurizer for ice cream mix that we know of in a large commercial plant in the East.

The high temperature-short time process for the pasteurization of ice cream mix would have been used much sooner except that equipment had not been developed that could heat a product as viscous and as difficult to heat as ice cream mix to pasteurizing temperatures without burn-on.

This equipment was developed over a period of years starting with fluid products such as whole milk and skim milk, heating them to temperatures as high as 190° in a one-stage heating operation and as high as 240° in a two-stage heating operation without burn-on, before the same process was applied to the more viscous products.

To prove that these more viscous products could be heated to temperatures up to 190°, sweet cream was heated without burn-on, and neutralized sour cream and unsweetened concentrated milk with 40% solids were heated, all without burn-on. There was also installed a heater preheating ice cream mix for test purposes, and it was found that the mix made up of concentrated products could be heated without burn-on to pasteurization temperature.

Hershey Creamery Used First Unit

It was after this background of experiences that the first high temperature-short time pasteurizing unit for ice cream mix was installed at the Hershey Creamery Company at Chambersburg, Pa.

In this particular installation, all the ingredients that go into the mix except the fruits and flavors are preheated and condensed. The mix is taken directly from the condensing pan and pasteurized by the high temperature-short time method.

The condensing operation is continuous, and as soon as the samples show that the proper concentration has been reached, the condensed mix is pumped from the pan at the same rate at which it is being concentrated and is pumped into two balance or measuring tanks alternately. The mix from these two measuring tanks flows by gravity into the balance tank with the level controlled by a float valve.

The mix is picked up from the balance tank with a centrifugal pump and pumped through a filter and through the first 16 tubes of the Ste-Vac Heater where the temperature of the mix is raised from condensing temperature of 130° to 157° at the end of the 16th tube. The mix leaves the heater at this point and goes directly to the suction of the homogenizer where the mix is homogenized at 157° F. The mix as it leaves the homogenizer has increased in temperature to 162° by friction and at 162° returns to the Ste-Vac Heater and is further heated to 175° through the last eight tubes of the heater. From this point it goes to the holding tube mounted on the heater which holds the mix for 23 seconds. Then it leaves the holder tube and goes to the ice cream mix cooler where it is immediately cooled over the water section of the cabinet cooler from 175° to 90°.

An interesting part of this process is that from the time the mix enters the heater at 130° and is completely pasteurized and cooled back to 90°, there is only an elapse of time of 92 seconds, or approximately a minute and a half.

The application just discussed is only one of the ways ice cream mix can be pasteurized by the high temperature-short time method.

Where all concentrated products are used in the manufacture of ice cream mix, it is just as practical to use the high temperature-short time method. This can be accomplished regardless of the products used, whether liquid or granulated sugar, or frozen or liquid

A paper presented at the Production and Laboratory Section of the 44th Annual Convention of the International Association of Ice Cream Manufacturers.

cream, providing the frozen products are put through a shaving machine and the particles are small enough that they can be pumped.

In this type of installation, a heater can be installed to take the cold products and preheat them to 125°. This will put all solid products in solution with a uniform starting temperature for the pasteurization and a uniform mixture. From this heater, the mix flows into the balance tank ahead of the high temperature pasteurizer, and from this point on, the process is the same as in the first method described.

Where all fluid products are used or the frozen products are pulverized and mixed thoroughly enough that they can pass through a regenerator, this equipment can be installed in place of the first heater to raise the temperature of the mix to 125° by regeneration so that the economy and saving of regeneration in both heating and cooling can be utilized.

Time Economy is Important

Another advantage of the high temperature-short time continuous method of processing ice cream mix that should be emphasized is time. It is only a matter of minutes from the time all products that make up the mix are taken from low temperature storage until they are preheated, homogenized, pasteurized, and cooled.

Might Be Fun Though

If a person tried to count all the fat globules in one drop of milk, and went on at the rate of one hundred a minute, ten hours a day, and six days a week, it would take him ten years to finish. And no wonder—the globules average about one ten-thousandths of an inch in diameter, and it would take many of them, placed one on top of the other, to equal the thickness of the page you're now reading.

In each of the three types of installations discussed above, the pasteurizing process is the same, and the homogenization of the mix is done during the heating process and actually before pasteurization because actual pasteurization starts as the mix enters the holder tube.

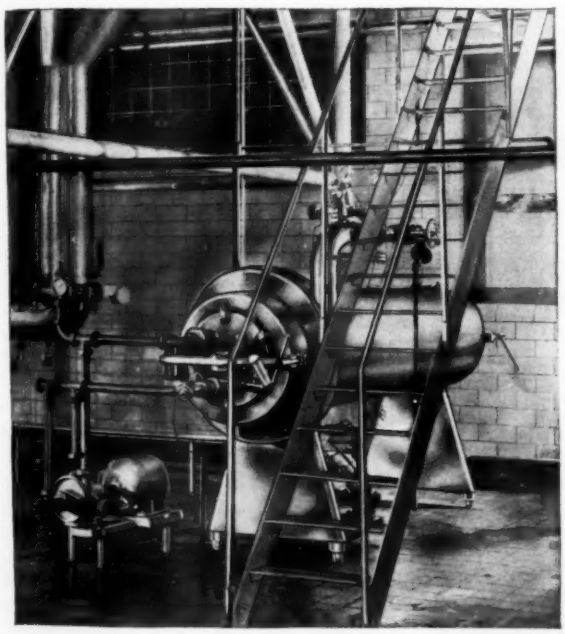
The foregoing methods as outlined show that high temperature-short time pasteurization of ice cream mix is practical in most types of ice cream mix manufacturing plants. The mechanical operation of the equipment for the preheating and pasteurization of ice cream mix without burn-on has been solved, and the results obtained bacteriologically have been more than satisfactory.

The back records at the Hershey Creamery Company for 1946 were checked and a record made of 381 sample counts where the mix was pasteurized by the batch method and heated to 165° and held for thirty minutes. During the same period in 1947, that is, the same months, 223 counts were checked where the mix was pasteurized by the high temperature-short time method, and it was found that the bacteria counts were comparable.

Boards of Health in other states felt that since high temperature-short time pasteurizing equipment for ice cream mix was not installed in areas under their jurisdiction they should have the nod of approval from U. S. Public Health Service before they would commit themselves to the installation of high temperature-short time pasteurizing equipment.

Data Presented to U. S. Public Health Service

U. S. Public Health Service had no recommended standard established for the high temperature-short time pasteurization of ice cream mix. The only standard they had established was for the



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batch method which was a minimum of 155° held for a period of thirty minutes. What they needed to know before giving their approval was whether the high temperature-short time method as it was being used was equivalent bactericidally to 155° for thirty minutes. The following research data was presented to U. S. Public Health Service:

1. The Resistance of Micrococcus Freudenreichii in Laboratory High Temperature-Short Time Pasteurization of Milk and Ice Cream Mix. National Dairy Products Corporation Research Laboratories, Inc., Research Report No. 195, Marvin L. Speck, *Journal of Dairy Science*, Volume 30, No. 12, pages 975-981. (December, 1947.)

2. Studies on Short Time-High Temperature Pasteurization of Ice Cream Mix at Hydrox, Chicago, Illinois. National Dairy Products Corporation Research Laboratories, Inc., Research Report No. 120, Marvin L. Speck, January 22, 1946.

3. Escherichia – Aerobactic Group in Ice Cream. (a) Determination from Laboratory Standpoint. Robert P. Myers and C. W. Sorenson, Proceedings 36th Annual Convention of the International Association of Ice Cream Manufacturers, Volume 2, pages 7-14, (1946).

4. Data regarding counts made during the first two weeks of January, 1948, at the Hershey Creamery Company, Chambersburg, Pennsylvania.

5. Daily bacteriological laboratory reports on finished mix for month of January, 1948, at the Hershey Creamery Company, Chambersburg, Pennsylvania.

6. Study of Short Time-High Temperature Pasteurization of Ice Cream Mix. L. R. Dowd and E. O. Anderson, Department of Dairy Industry, University of Connecticut, *Journal of Dairy Science*, Volume 26, pages 37-46, (1943).

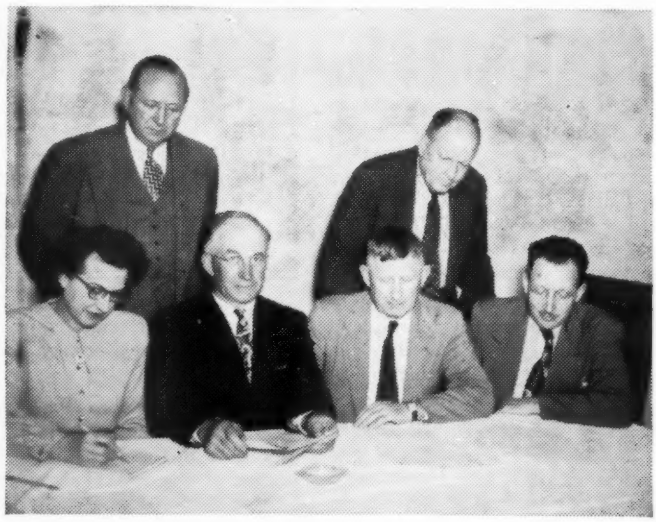
7. Mathematical solution of time-temperature cycle to destroy phosphatase and micrococcus freudenreichii in ice cream mix. W. J. Corbett, Dean Milk Company, Chicago, Illinois, letter of March 3, 1946.

After this data had been studied by U. S. Public Health Service, in their communication of March 16, 1948, they stated, and I quote:

"However, when compared with curves on E. coli (Strain 11B); M. Tuberculosis in Milk, Park, A.J.P.H., Vol. 17, p. 36; and E. coli (3U) in Ice Cream Mix (3), it appears that pasteurization at 175° F. for 25 seconds provides an appreciable safety factor from the standpoint of the destruction of pathogens.

"In view of the above, it is felt that health officers would be justified in permitting pasteurization of ice cream mix, at 175° F. for 25 seconds in approved and properly operated equipment, on a temporary basis, until such time as sufficient evidence is accumulated to prove or disprove the equivalence of this combination to 155° F. for thirty minutes."

"Milk For Health" Team Convenes



Working team of Milk For Health, Inc., shown above, has task of coordinating the authorizations which arriving at the Syracuse office from local Milk For Health groups throughout the state.

Seated, left to right, above, Mrs. Evelyn Schwartz, Harvey Wittman, Jacob Pratt, and Carl C. Camenga. Standing, left, R. P. Kinney and Ed Harmon.

The partial list of the research data that was correlated and presented to U. S. Public Health Service shows the tremendous amount of work that already has been done by technicians interested in the progress of the ice cream industry, all of which proves that the pasteurization of ice cream mix by the high temperature-short time method from a Board of Health standpoint is safe and sanitary and from an operator's standpoint is economical, practical, and produces a better finshed product.

(Following the presentation of Mr. Minthorn's paper he answered questions from the floor. The questions were of such high calibre and the answers so ably given that we print them in full. –Ed.)

Dr. Paul Miller, Carnation Company, New York: I was wondering what the advantages of high temperature-short time pasteurization in ice cream mix are.

Mr. C. M. Minthorn: Homogenization prior to pasteurization is one of the advantages, we think, because it is homogenized at 157 degrees – or it can be at the end of the heat at 175 degrees. The homogenization does take place before the actual 25-second holding period.

In a large operation there is less equipment involved.

Another distinct advantage that has been brought to us is the fact that you can pick the ingredients that go into the ice cream mix from low temperature storage and completely preheat, pasteurize and cool them in a minimum of time.

Also, you have positive control, the same type of control that is used on all high temperature equipment with the flow diversion valve, so that you have accurate temperature and time control on the unit continuously.

There is, too, a saving in labor. We only have the facts on one installation, but in processing 125,000 pounds of mix they stated, basing their figures on a previous batch set up, that they saved about 28 manhours a day, which is quite important.

Dr. Marcus Dey, Golden State Company of Los Angeles, California: I wonder if you would repeat those characteristics of mix pasteurized by this method that you related early in your paper. I did not get all the details on it.

Mr. C. M. Minthorn: I do not believe I know exactly what you mean.

Dr. Marcus Dey: You made reference to its effect on viscosity and freezing time.

Mr. C. M. Minthorn: Are you referring to the quote from Professor Dahle's statement?

Dr. Marcus Dey: I do not know who made the statement. I thought it was your own.

Mr. C. M. Minthorn: This was in a paper presented by Professor Dahle back in 1931. It was published in the "Journal of Agricultural Research" on May 15th. He stated: "The processing of ice cream mix at temperatures of 170 degrees or 180 degrees decreased the degree of fat clumping, reduced the viscosity and freezing time, and increased protein stability."

Is that the statement you wanted, sir?

Dr. Marcus Dey: Yes.

Mr. Earl Volberding, Foremost Dairies, Inc., Bristol, Tennessee: Would the short time used for your milk be sufficient for your ice cream mix? And in what capacities is it best to run your mix through? What I mean is could 8000 pounds per hour in an 8000 pound short time be used to have the same capacity as they do with milk?

Mr. C. M. Minthorn: The holder tube will determine that. If it was set up for 8000 pounds, and the holder tube for ice cream mix required 25 seconds, while milk required 16 seconds, it would take a longer holding tube. Your temperature is much higher.

Mr. Earl Volberding: Now, the same equipment that is used for milk, would it be satisfactory for mix, with the exception of the holder tube?

Mr. C. M. Minthorn: If the type of equipment you are using would heat the mix to 175 without burn-on, I would say it would be satisfactory. That will have to be determined by tests.

Dr. C. Koerver, Pioneer Ice Cream Div., The Borden Company, New York: How high can you heat a mix without burn-on? What would happen to a chocolate mix?

Mr. C. M. Minthorn: We have done it. The highest we have heated is 193 degrees. We have heated the mix as high as 190, and on one particular day when I was there 80,000 pounds of chocolate mix were run. But it was not heated to 190; it was heated to 175. And we did that without burn-on.

Chairman Ahlstrom: We have time for one more question.

Dr. Paul Miller: What type of equipment has been used to heat milk and that will heat ice cream mix without burn-on?

Mr. C. M. Minthorn: We have only used the Ste-Vac heater for that purpose, and we have found that that will heat it. We have heated ice cream mix as high as 190 degrees without burn-on.

However, we cannot start at 40 degrees and do it in one heating operation. It does require two-stage heating to go up to 175, 180 or 190 degrees. We can go from 120 or 125 to those temperatures, but we cannot go from 40 to 175, 180 or 190 in one stage. We can take it in two stages, the first stage to 125 degrees, the second stage anything up to 190. So, whatever your requirements would be up to 190, it can be done.

Dr. Marcus Dey: There are no plates involved in the heating equipment, are there?

Mr. C. M. Minthorn: That's right, sir. The plates could be used with it in regeneration, however, providing your cold products were in solution so they would go through the plate; that is, the prepasteurized product.

Dr. Marcus Dey: And further provided the temperature was high enough. I presume that is another qualification.

Mr. C. M. Minthorn: Yes, if they will go through, the regeneration can be arranged to take it up to that higher temperature.

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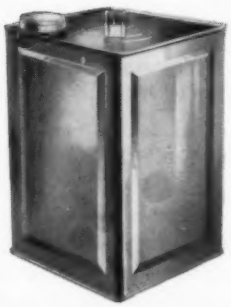

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20 Profit Savers in Lubricant Handling

By ERNEST W. FAIR

1. Where large volume of lubricants are used a central oil storage house, set apart from the main plant, is always best.

2. Avoid storage on wood floors for woodwork soaks up oil and grease from handling and becomes a fire hazard.

3. If possible have doors and windows of steel frame of roller type and fitted with wire glass and automatic closing devices.

4. Have lubricant storage facilities close at hand in order to reduce transportation time involved.

5. Where lubricants are stored in barrels or drums it is always best to have hoisting equipment handy.

6. Good temperature control in storage enables all types of fluctuations mean sweating and condensation of moisture in containers.

7. Pumps, meters and other measuring devices will quickly save their cost over hand handling and use where even moderate quantities are involved.

8. Keep oil drums on end and always check storage to see that no water can get into opened drums.

9. Make certain bungs and seals on drums are always kept tight to avoid moisture and other contamination as well as drippings.

10. Have drum seal and bung wrenches at hand in storage in order to always be certain that seals are tight.

11. Store only a slight excess of the amount needed. Lubricants are always better when fresh. Large stocks invite contamination and waste in use.

12. Keep monthly lubrication records for better and more accurate control not only in storage but also in use.

13. Always have suitable containers at hand to catch all oil drip.

14. Have reliable fire protection equipment close at hand near all storage and make sure this equipment is tested regularly and often.

15. Have a regular clean-up routine of all storage facilities as well as on machinery and equipment, particularly following a regular lubrication job.

16. Collect and keep all oil soaked clothes in covered metal containers and have them washed before they are used again.

17. Have sand at hand in sand boxes for fire protection but keep these away from oil containers for sand is a damaging abrasive when suspended in lubricants of any kind.

18. Get tough when someone permits spilled or dripped oils to accumulate anywhere . . . that generally means trouble of one kind or another.

19. Have it a hard and fast rule that all spilled oils or other lubricants are wiped up immediately for they are not only a fire hazard but are easy for someone to slip upon with resultant personal injury.

20. Avoid the use of lint-shedding rags for wiper clothes. Lint, when lodged in bearings or oil circulation mediums, will clog and cause damage.

CLEAN TUBES SCALE THE MOST

There Is a Relationship between Soot and Scale that Must Not Be Overlooked

THE ABOVE TITLE sounds almost like a contradictory statement, doesn't it? Yet it is a fact. The catch that "gets 'em" is that the words "on the outside" are omitted. In other words, the tubes that are dirty with soot will not get so dirty inside, because soot is about as good an insulator as there is against the flow of heat. Authorities declare that soot is a more effective insulator than asbestos, and that is "going some." To cause all boiler tubes to scale an equal amount in a given time, therefore, it behooves the operator of the soot blower to keep all tubes equally clean from top to bottom. And even then, unquestionably, there will be considerably more scale in the bottom tubes where heat is most intense. The tube that absorbs the most heat will naturally evaporate the most water and therefore will leave the most scale to cling to and impair the heat transmitting qualities of the tube. Thus the boiler is "twixt the devil and the deep sea" in that it is beset on both sides by a substance that is injurious to the plant owner's pocket book directly through the coal pile—soot on the outside and scale on the inside. If it is a faire tube boiler, the reverse is the case.

Also this explains why it is that in many boilers scale in the tubes is thicker on one side of the boiler than on the other. In such boilers it is usually found that the soot is blown off the tubes through the dusting doors at the sides of the setting. The cleaning, however, is not thorough enough because the boiler is not equipped with the proper kind of apparatus for regular cleaning. A hand lance thrust through the dusting doors does not clean the "far side" of the boiler. Instead of cleaning the tubes on the far side, it blows the soot from the "near side" over onto the tubes farther away and makes matters worse over there. In some cases it has been found that spaces between tubes have been packed completely full of soot, and the tubes might just as well not have been in the boiler at all. By investigating a problem of this kind with care, and studying the cross-section of a typical horizontal water tube boiler, it will be readily understood why and how it is possible for the tubes to become packed full of soot where hand lance blowers are still used.

Of course the better way to remove the soot is to install a permanent soot

(Please turn to Page 65)

The previous day the Dean company had announced a new economy half-gallon paper container of milk to sell for 35 cents, and Meadowmoor Dairies, Inc., announced a reduction of two cents on its half-gallon glass container which has sold for 35 cents.

In the suit the Dean company charged the defendants "have attempted to prevent reduction of the price of milk in Chicago by implicit threat of milk sales by all defendants below cost . . . and by other concerted illegal action."

Oliver Smaha, president of Borden's Chicago milk division, said the suit was "based in part on as yet untried cases filed by the government," and denied a conspiracy to fix prices or allocate customers. "Any discounts we have given are entirely lawful," he said.

The Dean Company charged in the suit that Borden and Bowman entered into a contract prior to July 1942 through which they paid allowances and secret rebates to gain the exclusive business of the A & P company. The suit alleges that American Processing and Sales Company paid allowances and secret rebates to acquire the National Tea Company's business in 1948, a Dean customer from 1942 through 1947, and a purchaser of $5,500,000 worth of milk in paper containers in 1947.

The Dean company was a leader in the Chicago fight to sell milk in paper containers. No date has been set for hearing the case.

●

LET 'EM ALONE SAYS COURT

Hoosier Dairy Firm Gets Injunction Against Mass Picketing In Strike Engineered by J.L.'s Organizers

STRIKING EMPLOYEES and union organizers must refrain from mass picketing and intimidation of employees at the Kroger Company dairy plant in Marion as a result of a temporary injunction handed down by the Federal District Court in Fort Wayne.

The strike of plant employees which started August 3, continues until a settlement is reached. In the meantime, peaceful picketing will be allowed and the Company will start receiving and processing milk on Friday.

The organizing unit of the United Mine Workers can receive no official recognition from the National Labor Relations Board because no Non-Communist affidavit has been signed by the union, and as a result no recognizing voting would result.

The temporary injunction was handed down in favor of the Kroger plant after a complaint had been filed by the company. Hearings were held Monday and Tuesday at Fort Wayne.

During the strike producers' milk ordinarily going to Kroger's has been handled by other dairy companies in the area.

●

CALIFORNIA LEGISLATION

(Continued from Page 10)

that the vaccination service by the State is also available without charge to beef calves as well as dairy calves.

Other new regulations require animal health inspection at least every six months, the homogenization of half and half, and determine the maximum milk temperature in transit (52 degrees if transported by tanker, 60 degrees in cans).

Licensing of milk testers and pasteurizers also was newly regulated. The purpose of the change is to separate the types of pasteurizers' licenses in accordance with the type of pasteurization process operated. Those who are qualified to pasteurize by the vat method will no longer be generally qualified to also operate the short-time, high-temperature

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flash method process which involves the manipulation of expensive equipment.

Another of the enacted laws prohibits auctioneers to auction off any milking cow unless it has been milked out within 12 hours of the sale.

New provisions on goat milk include conditions under which producers may sell it as a sterilized product, and ways and means to equalize the flow of goat's milk to market throughout the year. This last measure was requested by those who produce goat's milk for use as market milk.

Most of the other regulations concerning the dairy industry deal with small details in the sale of milk products, such as cheese-cutting and wrapping, or rinsing of glass containers before returning them to the distributor. Others are limited to mere technicalities.

Legislation Looking Ahead

There is one regulation, however, which seems to have not much practical application for the actual manufacture or sale of milk and milk products but which nevertheless, is welcomed by the more far-seeing members of the industry. It extends for eight more years the advertising, educational and research program of the California Dairy Industry Advisory Board. This program which was established temporarily during the war, enables the University of California to carry on research work which is considered by many as market insurance for the dairy farmer. It enables the processor to keep abreast of the changing conditions in the food habits and preferences of the consumers.

In the course of this program, the increased use of milk in bakery processes has been investigated, and consumer preferences in this matter have been studied. Research has started on the nutritive and food value of cottage cheese, one of the important outlets for non-fat milk solids in California. The possibility of producing shrink-proof ice cream is under investigation, and an attempt is being made to eliminate off-flavors in evaporated milk. By extending the program for eight more years, California legislators have given research men the opportunity to conclude some of their investigations which may prove of great value to the industry.

●

PLAIN TALK

(Continued from Page 24)

impress Joe Farmer with the need for sanitation, clean utensils, clean person, clean surroundings, precept must be bolstered by our own example.

Here's another observation: Why can't our dairy plants divert some of the competitive effort away from fighting for a supply of raw materials and toward increasing the volume of raw materials? Instead of trying to take customers from the plant down the street, or down the highway, let's help our present patrons increase their volume. There is a better goal for all of us – farmer, processor and consumer – in trying to replace cows which average 4,000 pounds of milk a year with cows which give us 10,000 pounds per year, than to try to outwit, outbid or outjockey a competitor for that skimpy 4,000 pound supply. Such pricing practices have much to do with the solidarity of an industry association.

In fairness, let me quickly add that there is much more temptation for aggressiveness in such a highly competitive business as dairy processing than in many industries – banking and public utilities, for example – where government and tradition have removed most of the competition. In dairy processing only the aggressive can survive and competition is ever present.

* * *

OUT ON THE short grass prairies we do not have the degree of labor organization that one finds in the urban east. But even the small plant with two or three or a dozen employees has what we might term "labor relations."

After a state butter contest I went to the manager of the plant which won first prize to get his picture and notes for a statewide news story. The manager quickly assured me that it was Joe Blow, the buttermaker back in the churn room, who had made that contest butter and who deserved the credit. The manager furnished me with a picture and biography, not of himself, but of that able buttermaker, and of course in the news release, the buttermaker rightly got the credit.

That manager was a genius in labor relations. He gave credit where credit was due. He realized that plant employees are human entities, with personalities and feelings and an appreciation of reward and attention for good work well done. Incidentally, the labor turnover in that plant seems to be less than in some comparable plants. Maybe there's a reason.

In conclusion, let me say that I admire the plant operators with whom I have been privileged to work. If some of my comments appear critical, let me quickly point out that these are criticisms of isolated cases. The typical plant operator works hard at a highly involved job with a widely diverse group of conditions and problems to meet. He must be a market analyst, food chemist, refrigeration specialist, county agricultural agent, steam engineer, transportation expert and skilled accountant all day and every day, in one of the most competitive of food processing fields. To succeed, he must be all man – and almost a genius.

●

49'ERS DAIRY STYLE

(Continued from Page 20)

are topics. These convention programs are practical because they are planned by the members for members."

Col. B. F. Castle, executive director, has announced that the Los Angeles program will be a unique one, featured by a joint general session with the International Association of Ice Cream Manufacturers on Wednesday afternoon, October 26. This new arrangement makes the convention week five days instead of six for anyone attending both milk and ice cream gatherings.

"Los Angeles entertainment plans for the Convention," he said, "are being made by the local committee, of which T. D. (Ted) Lewis is the milk chairman."

"The moment members enter California they will savor the true essence of hospitality. Committee members will board trains, be on deck at the airport and railroad stations, and even at San Francisco. There will be continuous sightseeing tours. Cars will be available through the courtesy of local members. Each car will have a host-driver. The Missions, Catalina, Salton Sea, Mount Wilson, Palm Canyon, Long Beach, La Jolla, San Diego—to say nothing of Hollywood—are all famous objectives.

"The ladies are going to have a super-duper holiday. Stores and shops in the Ambassador and along the adjacent famous Wilshire Boulevard will intrigue and delight them. Many members will visit the unusual plants and dairy farms near Los Angeles."

MIF Program Outlined

Oct. 24 – Monday morning opening general session. Monday afternoon five sectional meetings. Monday evening Awards Dinner.

Oct. 25 – Tuesday morning 8 a.m. Round Table Breakfast for Sales and Plant Sections. 9:30 a.m. general session. Afternoon sectional meetings. Evening banquet in the Ambassador.

Oct. 26 – Wednesday morning (new plan) 8 a.m. Round Table Breakfast. 9:30 five sectional meetings. Afternoon joint general session with Ice Cream members.

Among the distinguished speakers are: Richard Werner, California Dairy Advisory Board; Dr. C. M. Christiansen, University of Minnesota; Dr. Ira A. Gould, Dr. D. V. Josephson; Dr. N. P. Tarassuk; Dr. Paul F. Sharp; Dr. C. L. Roadhouse; Dr. E. M. Searles; George P. Larrick, Food & Drug Administration, Washington, D. C.; Dr. P. R. Elliker, University of Oregon; Dr. A. C. Dahlberg, Cornell University; R. W. Newman, Dept. of Agriculture, Sacramento; Dr. A. P. Stewart, San Francisco; Dr. T. F. Ford, Bureau of Dairy Industry, Washington, D. C.; Dr. J. M. Sherman, Cornell University.

A dramatic presentation at the joint session will be given by Mark Love of the Curtiss Candy Company when he thrills members with his "The Romance of Uncle Sam," a program of songs and stories which seeks to reawaken an appreciation and understanding of our American heritage. Mr. Love, whose thrilling baritone and dramatic gifts have placed him in the forefront of the operatic and concert world, traces the history and development of America from the Pilgrim Fathers to G. I. Joe.

Some highlights of the sectional meetings are:

Sales and Advertising: Monday afternoon symposium on California's Public Relations Program of Determining Milk Costs and Interpreting Them to the Public.

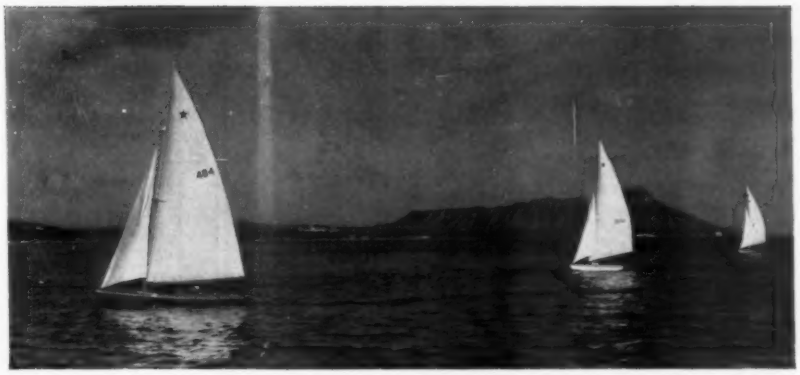
Plant: Wednesday morning session on How to Control Plant Costs with Proper Employee Education.

Laboratory: D. D. T. and Quaternary Ammonium Compounds are to be discussed Monday afternoon.

Milk Supplies: Contributions to milk hauling and development in California of handling milk in bulk tanks instead of cans from farm to plant.

Accounting: An unusual opportunity for dealers to study costs. A questionnaire covering plant costs only and requiring no identification other than geographical region will be posted in the Accounting Section meeting room. Members will place their own key numbers or key identifications on their questionnaire forms, and at the convention, will be able to compare their operating costs with those of many other members throughout the U. S.

Special trains are scheduled from the East and Chicago. The "Dairy Industries Special" train sponsored by the Milk Industry Foundation and the International Association of Ice Cream Manufacturers will follow a scenic route out through the Northwest as far as Victoria, B.C., then on to the convention, and home via the picturesque Southwest. Reservations should be made direct



Star class sail boats and Diamond Head will greet dairymen aboard the S. S. Lurline when she puts in at Honolulu. Legendary Waikiki Beach is at far left.

are the achievement of the General Dairy Industry Committee of California. On Wednesday afternoon California Hour will be observed at the Ball Room of the Biltmore from 5 to 7 o'clock. All members of the International, both active and associates, all members of the Milk Industry Foundation and all of the guests of both associations are invited to attend. The Dairy Industry of California will be the host.

Special exciting trips in this most scenic section of the country have been planned for the visiting ladies of both organizations. They will find the trip to California one of the most exhilarating travel experiences that they have had.

The Annual Banquet of the International will be held at 7:30 p.m. in the world renowned Biltmore Bowl, scene of the Academy Award dinners and other fabulous functions. Advance sale of the tickets will be made through the International office as in previous years. Attendance at the banquet will be limited to about 1000, the capacity of the Bowl.

For Visiting Firemen

The site of the Convention has been called "the land of magnificent distances." Those visiting Los Angeles for the first time will find much help from the Transportation Committee which is making the fleet cars of the dairy companies in Southern California available to take delegates to neighboring hotels and dairy plants and other trips during their stay. The delegate need only to approach the courtesy car, present his request to the driver, and he is on his way, in this land of hospitality.

The dairy operation in California will be of particular interest to Convention go'ers from other parts of the country. They will find the system of producing milk most unique, and side trips will be arranged by the committee for those wishing to visit producers and processors.

Honolulu Cruise

Accommodations on the luxurious Lurline which will head for Aloha land November 7th are rapidly being claimed by members and friends of the International and the Milk Industry Foundation. President McKenzie of IAICM has emphatically promised those journeying to Hawaii the most wonderful time of their lives. We urge every one to defer their vacation and spend it sharing the joys of the "President's Post Convention Cruise."

For those staying over to participate in the cruise special parlor car trips are being planned to beautiful points of interest in nearby Southern California. Committee's plans for these excursions will be announced before the Convention. through Mr. E. A. Harding, Passenger Representative, Pennsylvania Railroad, 390 Seventh Avenue, New York 1, N. Y. M. G. Van Buskirk, Executive Secretary, Illinois Dairy Products Association, 309 West Jackson Blvd., Chicago 6, is also sponsoring a special train to the convention. Folders with itineraries are available.

New Convention Format

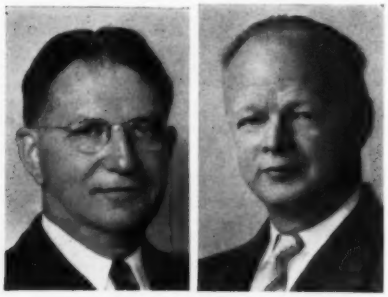
The International has previously announced that the Convention format has been changed and that sectional meetings will be held in the mornings rather than in the afternoons. The Production and Laboratory Council will convene in the Music Room of the Biltmore Hotel 9:30 to 12:15 Thursday and Friday mornings. The sectional meetings on Merchandising held under the auspices of the Ice Cream Merchandising Institute will take place in the Biltmore Theater 9:30 to 12:15 Thursday and Friday. The Controllers' Council will be conducted in Conference Room 1 in the Biltmore Hotel 9:30 to 12:15 Thursday and Friday. The Friday morning session of the Controllers' Council will start with an organized breakfast in Conference Room 2 of the Biltmore.

The most ambitious plans that have been laid for entertainment in connection with any of the Annual Conventions

NAMED BY NATIONAL DAIRY

Dr. A. H. Johnson and Dr. J. C. Mauer Will Take Over Top Research Posts in NDPC

NEW YORK, AUG. 24 – Dr. Arnold H. Johnson, who has been associated with the research work of National Dairy Products Corporation for the past 20 years, has been named director



DR. C. J. MAUER DR. A. H. JOHNSON

of research at the Company's Oakdale, L. I., laboratories, it was announced here today by Dr. Lauren B. Hitchcock, president of National Dairy Research Laboratories, Inc.

At the same time, Dr. Hitchcock announced the appointment of Dr. J. C. Mauer, who has been with National Dairy Products Corporation since 1934, as business manager of the laboratories at Oakdale.

Dr. Johnson resigned as assistant professor of biochemistry at the University of Minnesota to head the chemical division of National Dairy's laboratory in Baltimore in 1929. He subsequently was placed in charge of all operations in the Baltimore laboratory, and was transferred to Oakdale when the Company's new laboratory there was opened in 1947.

In 1946 he won the C. E. Gray award for "achievement in research, development of standards for dry milk, and for general industry and public welfare." He is a member of the American Chemical Society, the American Dairy Science Association, the American Oil Chemists Society, the American Association of Cereal Chemists and the New York Academy of Science.

Dr. Mauer was also associated with the Company's Baltimore laboratory, and later with Sealtest, Inc., in this city. In 1936, he was transferred to the Reick-McJunkin Dairy Company in Pittsburgh, where he served successively as assistant to the production manager, by-products sales manager, manager of milk, ice cream and evaporated milk plants, and personnel director. He went to Oakdale in 1947.

"Next week I will have completed 25 years of service here. I want to make it clear to him that I've got a watch!"

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SEE FURTHER PRICE DROP

Agricultural Price Level In for Seventeen Per Cent Skid Economists Predict

NEW BRUNSWICK, N. J., AUG. 25 – The average level of agricultural prices in the United States is 17 per cent lower than a year ago and some further down trend is probable, according to Allen G. Waller and John W. Carncross, Rutgers Agricultural Economists.

Writing in the August issue of New Jersey's Farm Economic Situation, they point out that rather spectacular declines in the price of some farm products have occurred. Farmers received 38 per cent less for corn this July than a year ago. Oats were down 33 per cent; butterfat, 30 per cent; milk at wholesale, 24 per cent; chickens, 24 per cent; hogs, 23 per cent; and beef cattle, 21 per cent.

Prices which United States farmers paid for commodities used in production declined only 4 per cent during the past year. Thus, with prices received for farm products falling faster than costs, farmers' labor earnings will be lower and their purchasing power correspondingly reduced, the economists state.

Waller and Carncross believe that a continuation of this squeeze is likely. Bumper crops and increased livestock production this year will result in further price declines for many agricultural products. Price supports will be of some assistance, they say, but some commodities probably will be sold, at least for certain periods, somewhat below the support levels.

Prices received by New Jersey farmers this July averaged 9 per cent lower than a year earlier. The price changes, however, have affected farmers differently. Poultry farmers' earnings have been fairly well maintained this year. Although chicken prices have declined sharply, egg prices have continued firm.

●

MARTIN, BARRON NEW V.P's

Roy E. Martin and J. H. Barron have been appointed vice presidents of the Stainless and Steel Products Company, St. Paul, Minnesota, it was announced recently by Mr. P. W. Casey, president of the firm.

Mr. Martin, who joined the Stainless and Steel Products Company in 1935 as chief accountant-credit manager and later became assistant secretary-treasurer, has been named Vice President in charge of Finance and Administration.

Mr. Barron has been with the firm since 1933 in production and engineering and, until his recent promotion, held the post of general sales manager. His new appointment is Vice President in charge of Sales.

The Stainless and Steel Products Company has been in operation since 1908 and is one of the pioneers in stainless steel construction for the dairy, food and chemical and agricultural industries.

PLUMBING FIXTURES

(Continued from Page 14)

the clogged area. If a slow-acting drain is not treated immediately, the clogged condition may extend into the piping for some distance beyond the trap because the slow movement of the water allows solids to settle out. Eventually the condition may become so bad that it is necessary to tear out walls and piping.

If fixtures are frequently and thoroughly cleaned, the surfaces will remain bright and glistening. If cleaning is neglected, however, certain substances may build up what appear to be stains on the surface, especially in areas that have mineral-bearing waters. If the fixture is of an acid-resisting material (all vitreous china is acid resisting; certain enameled iron fixtures are acid resisting, and will be so marked or initialed), a mild acid solution may be used to remove the surface accumulation. An oxalic acid solution may be used to remove the surface accumulation. An oxalic acid solution of 5 percent strength can be swabbed over the affected surface, then rinsed off with clear water when the stain has dissolved. If the accumulation is extremely bad, a 10 percent solution of muriatic acid should be used. Use rubber gloves when applying this solution and take care not to leave the acid on chromium parts, for the acid will corrode the chromium if allowed to stand.

Drinking Fountain Troubles

Drinking fountains, too, come in for their share of trouble. On a hot day the valve on a drinking fountain may be opened and closed more often than any other valve in the building. Sometimes drinking fountain valves or handles stick, leaving the water running. Sometimes closing springs break. Such troubles should be corrected immediately, for water wasteage can be tremendous with constant-running drinking fountains. A stuck fountain is usually running at virtually ful flow.

Another common trouble of drinking fountains is poorly adjusted flow control. Most modern drinking fountains have an automatic stream regulator, but there are a few installations that do not have this device. It is almost impossible to control flow properly without the regulator, for no matter how carefully the original flow setting is made, variations in water pressure are bound to occur, with the result that the stream is merely a dribble at times, and at other times shoots clear of the bowl onto the floor. The automatic stream regulator corrects this tendency by automatically increasing flow when pressure is low and automatically decreasing flow when pressure rises. It is recommended that such a device be installed where a drinking fountain is not already so equipped.

Even with automatic stream regulation, however, the regulator setting should be checked from time to time, for wear within the mechanism can change the flow. Most regulators are the rubber diaphragm type, and in time the diaphragm may need to be changed. Valve seats and rings need repair periodically just as in any standard faucet. Abuse of the mechanism frequently results where stream flow is not kept normal. If the flow is not adequate, exasperated users will try to turn the valve handle beyond its normal stopping point, and some may succeed, damaging the mechanism. Some become angry and kick or hammer the handle or tamper with the bubbler. If flow is too strong, funsters take delight in seeing how far beyond the bowl they can squirt water, with the resultant mes and floor-slip hazard.

Care eof plumbing is not complicated or difficult. Any cleaning staff can be taught quickly the necessary procedures of regular maintenance. Most important is the establishment of a definite program to keep the sanitary plumbing equipment working and looking its best all times. If this is done faithfully, the equipment will last and retain its beauty for the life of the building.

A New Milk Filter
designed for
Small Milk Plants
SPARKLER MODEL 8-M-3

This new Sparkler Model 8-M-3 milk filter is designed especially to meet the requirements of the small milk plant.

It is a low cost complete unit that is simple to install in the production line without separate pump and motor. The filtering area is one square foot which provides ample capacity for maintaining a high flow rate with regular pipe line pressure. An auxiliary pump can be installed ahead of the filter if pipe line pressure is insufficient.

One important feature of this filter is its leakproof quality made possible by the method of horizontal plate assembly standard with all Sparkler filters.

Filtration is complete, all fine particles of foreign matter in the milk are removed. Either filter paper or cloth can be used and is disposable with each cleaning. All parts are stainless steel including the one inch sanitary tubing connections.

With this Model 8-M-3 filter the small milk plant can deliver the same quality milk that is produced by more expensive, larger volume milk filtering installations.

PRICE FOR COMPLETE UNIT WITH FITTINGS READY TO INSTALL $220.00

PROMPT DELIVERY

SPARKLER MODEL 8-M-3 MILK FILTER

SPARKLER MANUFACTURING COMPANY

Mundelein, Illinois

Out of the Holding Tank

Conway, Arkansas

Conway's milk ordinance No. 116, one of the longest on the city's statutes, will be tested in the supreme court, Fred Bates, sales manager of the Terry Dairy Company of Little Rock, said shortly after one of Terry's drivers had been arrested in Conway for alleged violation of the city law.

Jack Knox of Little Rock was arrested after he had made delivery of milk from Little Rock to the Model market on Harkrider Street. The officer was acting on orders from the city council, which directed the ordinance be strictly enforced.

Knox was charged with violating that section of the ordinance which provides "no milk or cream shall be sold in the city of Conway that has been pasteurized outside the county of Faulkner."

"The ordinance is unconstitutional and we shall carry the case to the supreme court to prove it," Mr. Bates said.

The Terry official conferred with counsel here regarding the Little Rock firm's defense of Knox.

●

Little Rock, Arkansas

Seventeen dairies supplying Greater Little Rock met requirements for Grade A milk and cream during the six months prior to July 1, Dr. William P. Scarlett, city health officer, reported.

City dairy inspectors rated the following distributors who met the requirements: Tall Timber Jersey Farm, premium raw milk distributor; Martin's, Roldo, Bell-Thomas and Westwood dairies, distributors of Grade A raw milk; Boyd Milk Products Co., Coleman Dairy, Inc., J. T. Fisher, Herndon, Mayflower, Minton & Hickey, E. W. Prickett, Singley, Thomas-Dixon, and L. C. Young dairies, Terry Dairy Co., and L. B. Parker Dairy Products Co., Grade A pasteurized milk distributors.

●

Pittsburgh, Pennsylvania

The new Harmony Dairy at 800 Fulton Street, North Side, Pittsburgh, exemplifies modern dairy construction and represents the last word in today's dairy operation and milk handling technique.

The outstanding feature of the equipment in the new Harmony Dairy is the electric pasteurizer. A completely automatic short-time pasteurizer, capable of handling 1000 gallons per hour, it heats the milk accurately so that overheating or underheating is avoided. As a result, the vitamin C content is maintained and the fresh natural taste is retained in the milk.

All of the air entering the plant is filtered, and glass blocks are substituted for windows, thereby preventing the infiltration of outside dust and dirt.

●

Denison, Texas

New and improved pasteurization machinery has been added to their equipment by the three Barker brothers, who operate the Barker's Dairy and Creamery at 700 West Main.

A new line of frozen custards has been added to their line of products which includes, besides pasteurized and homogenized milk, chocolate milk, whipping cream, buttermilk and all kinds of ice cream novelties and specialties.

From a business that started in 1919 with four cows, the Barker's Dairy and Creamery has expanded until it now serves a large part of north Texas and southern Oklahoma, east to Antlers and north to Colgate, and all the towns in between.

The business was incorporated in 1948 and the officials of the corporation are H. D. Barker, president; Jack Barker, vice-president and treasurer; and Joe Barker, secretary.

●

Pittsfield, Illinois

The Midwest Dried Milk Co., whose plant here burned early Saturday morning, July 9, began rebuilding the southeast section of its property on the following Monday morning.

The company erected a Quonset type building 40x40 feet. The building was purchased from the Kamar Company and contractor K. Barber did the construction. Flood lights were erected so work could be carried on day and night. The new structure was ready for occupancy in a little over a week.

●

Tylertown, Mississippi

Improvement of Walthall county's milk handling facilities will be completed on the formal opening of the St. Charles Dairy's newly-constructed milk plant here.

On hand for the opening will be officials of St. Charles Dairy, including Mrs. H. W. Maitrejean, president, and Frank Crowe, St. Charles fieldman for this area.

The new plant, of concrete and steel construction, was built at a cost of $50,000. To serve 109 Walthall dairymen, it will replace the plant in which they now operate, built in 1928 by a Kentwood, La., firm, and purchased in 1934 by the New Orleans dairy concern.

It was revealed that the new plant had grown out of the demand for larger facilities for milk handling in this area. "The number of customers we now have has tripled in the past three years," Mrs. Maitrejean said, "and we have needed a new plant for some time."

●

Trinidad, Colorado

Plans are rapidly being formulated for the opening in Trinidad of a large, modern cheese factory operated by Alpine Milk Products, Inc., headed by Senator Ben Veltri of Trinidad, and which includes some of Colorado's top-flight business and industrial leaders as stockholders and directors.

Papers of incorporation were filed in Trinidad, listing the corporation's capital stock at $300,000 and details of the firm's proposed operations were disclosed recently by Veltri, who is president of the corporation.

John Carbone of Denver is vice president and Ralph L. Carr, former governor of Colorado, is secretary-treasurer. Members of an executive committee are Senator Dan J. Thornton, prominent Gunnison cattleman, J. Price Briscoe of Idaho Springs, also a member of the state legislature. Harry M. Anholt, Denver hotel manager, and Ed Nicholson, prominent air lines official.

Veltri also said the company hopes to eventually expand into the field of evaporated goat milk for which, survey have shown, there is a fine market potential.

●

Boise City, Oklahoma

M. C. Myers of Guymon has purchased the Bellomy Dairy here and

assumed management. Mr. Myers, formerly of Lawton, expects to move his family to Boise City soon.

Dennis Bellomy, former owner of the business, has not announced his intentions for the future.

●

Auburn, New York

One of the most progressive concerns in the matter of keeping abreast of the times is the Jewell Dairy of Auburn. The concern has just installed a modern homogenizer and clarifier in its Grant Ave. plant. The dairy deals in all kinds of dairy products and in any quantity the customer wants. It handles Guernsey and Jersey milk from approved herds only and has a large clientele in Northern Cayuga county.

●

Corry, Pennsylvania

The Corry plant of the Dairymen's League Co-op Association will be closed within the next month.

This move was confirmed by H. H. Redding, local plant manager, who said the Corry operations will be transferred to the Spring Creek plant which was recently acquired by the co-op from Abbott's Dairies.

In explaining why the Corry operations are being transferred, Mr. Redding explained that the Spring Creek plant is on a railroad siding where the local plant is not and there is also room for expansion at the Spring Creek location while the Corry plant is closely hemmed in by other property.

●

Cincinnati, Ohio

Eleven Cincinnati dairies, a milk bottle service and a milk exchange must stand trial on charges of conspiracy to fix milk prices in the Cincinnati area, U. S. District Judge Robert R. Nevin, ruled recently.

The court made the ruling in denying a defense motion for dismissal of an indictment returned here September 24, 1948. No trial dates were set.

●

Jefferson, Ohio

The Dorset Co-operative Milk Co. has agreed on a plan with the Lawson Milk Co., Akron whereby most of the co-operative's surplus milk from now on will be more profitably utilized, Manager J. M. Benson has announced.

Mr. Benson said that the Akron concern will use this surplus in the baking, ice cream and candy business.

He said that the contract is particularly advantageous to the cooperative which has had to sell surplus milk at a considerable loss so far this season.

●

Toledo, Ohio

The Page Dairy Co. of Toledo, Ohio, late in July petitioned the Washtenaw circuit court to order the City of Ann Arbor, Michigan and its health officer, Dr. John A. Wessinger, to issue a license permitting the dairy to sell and distribute milk in Ann Arbor. A May 6 application for a license was rejected by Dr. Wessinger in what the dairy claims was an "arbitrary, unreasonable and discriminatory" action.

The petition for a writ of mandamus against the city and Dr. Wessinger asserts that the rejection of the license application was made "without lawful basis either under the then existing Ann Arbor milk ordinance or otherwise."

Ann Arbor's City Council passed an amendment to the milk ordinance May 16 stating that "no pasteurized milk or milk products shall be sold within Ann Arbor which shall not have been pasteurized in approved milk plants within a radius of eight miles of the Ann Arbor City Hall."

●

Waterloo, Iowa

Henry J. Stelling, 70, who had operated a creamery at Newhall, Iowa, for

Stainless Steel and Nickel Alloy

THOMSEN

Equipment for the Processing Industries

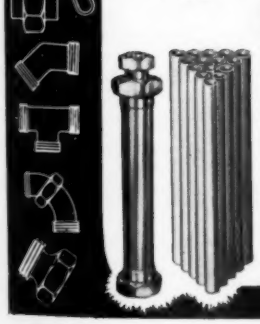
Sanitary & Brine Pumps

Direct drive; and heavy duty coupling types. Smooth, steady flow. Higher production, lower cost. Sanitary rotary seal. Precision workmanship means less wear and longer service. Easier to keep clean. Write for descriptive data giving capacities, prices, etc.

$31.15 UP

Valves and Fittings

Complete line nickel alloy and stainless steel. Finest of workmanship in every detail. No pit-holes or rough surfaces. Highly polished to mirror smoothness. Easily cleaned.



Line Filters and Tubing

Filter barrels of white metal or stainless steel. 1", 1½", and 2". 1,000 to 6,000 lbs. per hour capacity. Stainless steel and nickel alloy. Tubing, 10' lengths, 1" to 4" diam. All finishes. Ask your jobber or write for descriptive literature.

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KENOSHA, WISCONSIN

BE WISE BUY WISE

Here's the NEW and BETTER WAY!

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COMPOSITE MILK SAMPLES

WITH THE

Compo-Cooler

REFRIGERATED AND INSULATED

Successful Milk Plant Managers in every section of the country have bought and are using *Compo-Cooler* Sample Bottle Cabinets.

One of the many reasons is that *Compo-Cooler* handles your composite milk samples rapidly and at a big saving of time and labor.

Compo-Cooler gives you complete electric refrigeration. All cabinets are lifetime stainless steel throughout, with a capacity, style and size to fit your particular plants need.

FREE Write today for illustrated booklet and complete details.

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GLENS FALLS, 1 NEW YORK

many years, died here Aug. 1, of a cerebral hemorrhage, at the home of a daughter, Mrs. Stanley Horak.

●

Waterloo, Iowa

The Cedarside Dairy here has a processing room, of all stainless steel pasteurizing vats equipped with Sentinel Control, the only one of its kind in Northeast Iowa.

It uses a soaker type bottle washer, that cleans and sterilizes 1,800 bottles per hour, and an automatic filling and handling machine, that has a capacity of 30 bottles per minute.

In business here for 29 years, its dairy products are sold in eleven Iowa towns.

Its motto is "See What You Buy — Buy It in Glass," as it does not put out any milk in paper containers.

●

Huntington, West Virginia

Russell C. Plymale, 164 Hughes Street, was named milk inspector for the Cabell-Huntington Public Health Department. The appointment was made by the Cabell-Huntington Public Health Board at a meeting at City Hall.

Edward S. Love, formerly milk inspector, will remain as a member of the staff of the department.

●

Beckley, West Virginia

Clyde Minster, production engineer for Greenbrier Dairy Products, spoke on "Coordination of Effort," at the 34th annual convention of the Virginia Dairy Products Association held recently in Roanoke, Va.

●

JOINS CREAMERY

Grand Forks, N. D.—H. M. Torvik has purchased an interest in the Valley Creamery in East Grand Forks. Mr. Torvik will have charge of quality control and distribution at the Valley firm.

●

TREAT FOR THE KIDS

A special attraction expected to be one of the outstanding entertainment features of the International Dairy Exposition is the "dream sundae" contest for teen-agers which will be held in conjunction with the "World's Fair of the Dairy Industry" at the state fairgrounds Indianapolis, Ind., Sunday, October 9. The exposition dates are October 8 through 15.

Eligible contestants will be boys and girls from 8 through 15 years of age. The period for entering local contests has been set as August 25 to September 10, with that date being the deadline. Winners of these local contests become eligible to compete in the finals at the state fairgrounds here October 9.

The contest is free to all teen-agers. They must name and prepare their dream concoctions and will be called upon to eat the preparation. The container may be anything up to a 5-gallon washtub and all the ice cream, syrups, nuts, fruit, wished may be used, at no cost to the contestant. However, the entry must be able to eat the sundae manufactured within the 15-minute time limit.

Sponsors of the local contests besides the International Dairy Exposition will be the individual local Junior Chamber of Commerce unit and a local dairy group or firm. Suitable prizes will be awarded at the local affairs, including the winner's expenses to the exposition here.

Winners in the final event here will receive among other things, a $100 U. S. Savings Bond, a bicycle, portable radio and $25 government bonds.

In announcing and outlining plans and rules for the contest, Oscar A. Swank, general manager of the exposition, said elimination contests will be held throughout Indiana September 17.

Advance sale of tickets to the exposition went on sale a few days ago and 25 per cent of the 175,000 allotted have been taken. Gate admission is 60 cents, advance tickets, 40 cents. Nearly one-half million persons from the United States and Canada are expected.

MANTON GAULIN EXPANDS

The Manton Gaulin Mfg. Co. of Everett, Massachusetts, makers of homogenizers, have just finished construction of a new addition to their factory which adds about 15,000 additional feet of floor space, and increases their factory capacity to keep pace with increasing sales volume, according to a recent announcement by D. G. Colony, president of the company.

This new brick and reinforced concrete building, which connects with the present Manton Gaulin factory, is of modern, fireproof construction. A hot air and air conditioning system has been installed which combines with fluorescent lighting to make for better working conditions.

Special features include overhead receiving doors and elevator of 20 tons capacity. The new building also contains one of the largest boring mills in New England, weighing over 30 tons. The company has graded a new piece of land directly adjacent to the building to provide a larger, more convenient parking lot for employees and visitors.

●

ST. PAUL REPRESENTATIVE

R. E. Lonsdale, manager of sales for Monarch Cleaning Chemicals, Inc., announces the appointment of Mr. Wayne Kroeger as Monarch's representative in St. Paul.

Mr. Kroeger has had previous experience with several pharmaceutical houses in the middlewest.

"Don't ya think it kinda does something for me?"

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SEVEN BLUES FOR ABBOTTS

Guernseys Exhibited by Philadelphia Concern Collect Twenty-one Ribbons at Breeder's Show

LOCUST GROVE Farm, Westville, N. J., operated by Abbotts Dairies, Inc., won the honor as Premier Exhibitor and Breeder at the New Jersey Guernsey Breeders' Association Annual Show held at Lawrenceville, N. J., August 20.

Of the 142 entries at the show, drawn from New Jersey Guernsey Pure Bred accredited herds, free from Bangs disease and tuberculosis, Abbotts won 21 ribbons in the open classes. They took seven 1sts, five 2nds, and two 3rd places, including Senior Champion Bull and Grand Champion Bull. Adjudged Grand Champion Bull of the show was Fairlawn H. Invincible, who won the same award in 1948. Junior Champion Bull Class was won by Bondwick's Gay Lad.

In the female classes, Abbotts won the Junior Champion Female of the show with Locust Grove I. Pauline, as well as the reserve Grand Champion with Bondwick's Matilda. Abbotts entries also won the Junior and Senior Get of Sire Classes.

The show was held at H. M. Pate's Farm, "Glenburnie," at Lawrenceville. The judge was Guy E. Harmon of Queenstown, Maryland, who is chairman of the type committee of the American Guernsey Cattle Club. He is one of the outstanding judges in the country.

Joseph Broadhurst, manager of the Locust Grove Farm, is widely known in dairy and agricultural circles, and has an enviable record as a Guernsey breeder. He has nearly 300 ribbons won by members of his herd. His assistant is Fred Brewer, herdsman for over twenty years.

●

FIELDMEN PLEASE NOTE

Ladino clover as a main crop, and alfalfa harvested as grain silage — giving him the best in milk production — has helped bring Donald Worthington, Great Barrington, the title of Massachusetts champion in the semifinals of the 1949 New England Greener Pastures contest.

His outstanding job of producing good pasture and roughage for his dairy herd next goes in competition against performances of single state winners in each of the other five New England states. A New England winner will be named in this final elimination. John Holopainen and Son of Hubbardston and Ray White of Acushnet were runners up for the Massachusetts title.

Worthington, who beat out the two other topnotch Bay State dairymen in the opinion of the judges just completing their tour of New England to pick the individual state winners, took over operation of his family farm four years ago when he left the military service. He has a pure bred herd of 51 Jerseys and retails about 450 quarts of milk daily. Average butterfat test in 1948 was 5.9%.

His hay and pasture is produced on meadow land totaling 104 acres. He has alfalfa on the drier (lighter) soil and ladino clover mixtures on heavier soil. His nurse crops, used for supplemental pasture, are rye in early spring, oats in early summer and in September. Worthington is convinced that grass silage gives better milk production than corn silage. Using a new type foliage chopper, he now has 300 tons of grass silage and plans to feed large amounts per cow with but little dry hay. He feeds 60 lbs. of grass silage per cow per day and has gone as high as 80 lbs. for short periods. He pen stables his young stock.

Should Worthington be named New England winner, he will receive an 18-inch cup donated by the Governors of of New England. Trophies will be awarded on Governors' Day at the Eastern States Exposition, September 18, in Springfield. The 18 dairy farmers who competed for state honors will be guests at the Exposition.

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Fluid-Motor Operator

CRANE CO., Chicago, has announced a simplified fluid-motor operator for gate valves. This new design makes possible extensive use of motor operated valves. The device can be operated by water, oil or compressed air or gases.

The motor unit, comprising the motor, gear box and yoke, is bolted to the valve bonnet; and the motor operates the valve

stem through the gear box. The motor derives its power from five flexible diaphragms, mounted radially about an eccentric on the drive shaft. The operating fluid is admitted in rotational sequence to the five diaphragms, which actuate pistons that transmit the thrust to the eccentric through a roller bearing mounted on the shaft. By means of a suitable control, the operating fluid can be admitted through either of two entrance ports, controlling the direction of operation of the motor for opening and closing the valve.

The valves can be operated by a wide range of liquids or gases at pressures from 40 to 300 psi. The operating mechanism delivers a high starting torque and is adjusted to deliver a greater torque for unseating the valve than for seating it.

A handwheel is furnished for manual operation in the event of pressure failure.

Valves equipped with the new fluid-motor operator are available in most types of Crane iron-body gate valves in sizes 4-inch through 30-inch. Development is in progress on a motor for valves of still larger size. The wide choice of operating fluids and pressures for powering the fluid motor simplifies the problem of plant installation, since available fluid pressure sources may be utilized.

•

Non-Ink-Throwing Pen

A SOLENOID-actuated pen which avoids ink-throwing while providing speedy recording has been developed for use on circular chart electronic potentiometers by Brown Instruments division of Minneapolis-Honeywell Regulator Company.

The new operation pen, in field test for several months, makes use of an amplifying linkage designed so that the solenoid's high velocity reaction is almost spent before the pen is picked up and moved. The pen is a V-type, holding a five-day supply of recording ink.

The new device, now available, is said by Brown engineers to be essential for thermal limit recording in continuous pasteurizing processes, for temperature measurements on tire presses or rubber curing and plastic molding, and for many other applications.

Glass-Pipe Coupling

THE FISHER & PORTER Company announces a new threaded metal coupling, for use with Pyrex glass pipes lines. The new coupling greatly simplifies the installation of glass piping by replacing three-bolt triangular metal flanges. The use of wrenches is no longer

necessary and perfect alignment is assured according to the manufacturer. The danger of breakage due to uneven take-up is eliminated. Installation time is reduced up to 60% in comparison with alternate methods. Metal couplings are available from stock in sizes ¼″, ½″, ¾″, and 1″ for making glass-to-glass or glass-to-metal connections.

•

Portable Spray Drier

A UNIQUE portable spray-drying unit of well-known Danish design is being made available in this country through the Niro Corporation, an American firm with offices at 52 Broadway, New York City.

This compact laboratory unit, selling in the $3,500 price range, is particularly designed for experimental work in universities, laboratories, and small scale production in pharmaceutical and industrial organizations. It may be easily wheeled from one department to another. Its performance is parallel with that of the large production Niro units now in use

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throughout the world. This makes it possible to determine, on a small scale, the practicality and the technique of spray-drying various substances on a large scale.

The Niro Portable Laboratory Spray Drier features the specially designed, high-speed atomizer head. This atomizer head, rotating at 50,000 RPM, ejects the liquid product as an extremely fine mist into the drying chamber, where circulating warm air instantaneously evaporates the water content. The dry product falls to the bottom of the chamber as a fine powder, where it is funnelled out as a finished, easily soluble product.

The product of the Niro method is uniform in size, spherical in shape, and can be of extremely high density.

The new portable unit is constructed of stainless steel and glass, making it particularly suited for conducting test runs on a wide variety of materials. It features a compact control panel and an eye-level window in the drying chamber, which has a top easily removable for cleaning. Finished material is discharged into a glass container immediately above the control panel. The unit is equipped with both electrical and gas heating elements, and either may be used. Its capacity is 2-15 lbs. of water evaporated per hour — depending on the material and temperature applied to the drying air.

Literature describing the Niro method and systems is available on request to Niro Corporation, 52 Broadway, New York City.

●

TK Compound

THE Du Bois Company of Cincinnati is offering TK, a new compound, to the Bottling and Food Industries for use with caustic in bottle washing equipment, or as a rinse additive. TK is a combination of wetting agents, organic and inorganic sequesterers and inhibited alkaline cleaning compounds designed to eliminate "Bottle Haze" and control hard water scale in bottle washers. It also prolongs the life of the caustic solution by increasing both its germicidal action and its cleaning strength. TK is particularly effective in the dispersion of milk films.

Additional uses for this product in the Food and Bottling Industry are: for the hand washing of utensils and equipment, washing down of walls and windows to prevent slime and mold, and similar hand washing jobs. The controlled alkalinity of TK makes it safe on hands and on paint; its balanced cleaning action helps eliminate hard scrubbing and speeds cleaning.

For additional information on TK write the Du Bois Company for data sheets and a sample.

●

Sanitary Pipe Tank

A STAINLESS STEEL sanitary pipe tank that sells for less than $300 has been announced by the Girton Mfg. Company of Millville, Penna. This company, which specializes in making

sanitary cleaning equipment, has designed this tank to meet the growing need for economically priced sanitary pipe cleaning equipment in stainless steel.

A feature of the tank is the complete list of accessory equipment that can be added to it to meet the varying needs of individual plant operations. Removable racks are available, as is a removable shelf. A pipe cleaning machine can be added to the tank. A fresh water rinser which rinses both inside and outside the tank is also available. With this equipment, the plant can soak, scrub and rinse its sanitary pipes and fittings, assuring a complete pipe cleaning program.

The Girton Mfg. Company has published a bulletin on the tank, the sanitary pipe cleaning machine and all accessory equipment. It will be sent upon request to interested parties.

●

Condensation Eliminator

FROST condensation on low temperature heat exchange coils is claimed to be eliminated in a system recently developed by the Surface Combustion Corporation of Toledo, Ohio. The system eliminates defrosting such coils and has been tested at temperatures as low as 100° F. below zero. An adaptation of the Kathabar Humidity Control System, the new system may be used in cold storage spaces or for other applications in the industrial fields where a supply of cold dry air is required. Its operation is entirely automatic and continuous.

The new Kathabar Frostless System prevents the accumulation of moisture by continually spraying an absorbant solution over the cold metal of the heat exchanger. This solution absorbs any condensed moisture and drips down into a sump, after which some of it is passed through a regenerator which extracts moisture from the solution so that it will be able to absorb more on the next cycle.

The liquid used to absorb the condensed moisture is Kathene Solution, composed largely of lithium chloride. The solution also has a slightly antiseptic effect on the air passing through it and removes dust and odors, while leaving no odor of its own in the air.

Utilities needed for the Kathabar System are a small amount of low pressure steam (for use in the regenerator) and electric power to drive the circulating pump and the blower. A standard refrigeration cycle is also required to cool the refrigerating gas or circulating brine.

More specific information may be obtained by contacting the Kathabar Division of the Surface Combustion Corporation, Toledo 1, Ohio.

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Microscope

A NEW SERIES of microscopes incorporating many thoroughly tested new features and refinements for the convenience of industrial laboratory and research workers, is announced by American Optical Company, Scientific Instrument Division, Buffalo, N. Y.

Pilot models of the new AO Spencer microscopes, the announcement states, have been subjected to hard wear and actual use for over five years as a testing procedure. The new stand of the microscopes, made of aluminum, has been claimed to give increased strength and double rigidity. The inclination joint has shown no measurable wear after two million reciprocating motions. Tests approximating 20 years' wear revealed less than .2 micron backlash in the redesigned micrometer screw fine adjustment.

A new attached illuminator is optional with these microscopes. It provides illumination that fills the field of all objectives from the low power "finder" to the oil immersion without refocusing the condenser.

The fork-type substage is larger, sturdier, and has new locking and keying devices. A new tension adjustment makes it possible to set coarse focusing and substage controls for as easy or as stiff operation as desired. All controls are provided with two knobs, one for each hand. The fine adjustment has been located lower on the arm and closer to the mechanical stage and substage controls.

A new "pinch grip" mechanical stage is incorporated. It permits rapid insertion of slides without danger of disturbing mechanical adjustments. A completely new 10X divisible objective is supplied. It has an N.A. of .25, working distance increased to 6.8mm, and improved color correction. The cut-away boot permits better oblique top lighting. The new dustproof, dust shedding nosepiece centers objectives by means of a ball-and-groove stop. It has dual-cone construction that doubles bearing surface.

New Two-Gallon Pasteurizer Developed For Use in the Home

A NEW MODEL, P-2000, Safgard Home Milk and Cream Pasteurizer, has been developed by the Guard-It Manufacturing Company. It is a holder type pasteurizer of 2-gallon capacity, completely automatic during the pasteurizing cycle, and utilizing agitation during the heating and cooling periods. Complete immersion of the milk container in the hot water is accomplished by using a rubber cover which insures uniform heating of either milk, cream or skim milk. The construction is of aluminum and stainless steel, including a nylon motor bearing.

The performance of the new model Safgard pasteurizer is shown in Table 1. Some lots of the raw milk used in these trials contained numerous bacteria while some lots contained fewer bacteria. These different lots represent numbers of bacteria that may be expected to be found in milk produced on many farms. Regardless of the numbers of bacteria present in the raw milk, the Safgard pasteurizer destroyed about 95 to 99.9 per cent of them the report stated. This destruction of bacteria in milk pasteurized in this new pasteurizer is as complete as is obtained with pasteurizers in large commercial plants. Some bacteria are not destroyed by pasteurization but are harmless and do not produce disease.

The pasteurizer was subjected to another rigorous test. Phosphatase tests were made at different points on the inner surfaces of the milk container and of the milk. This test is the most sensitive one ever developed to determine if milk is properly pasteurized and is recognized by Public Health Authorities.

The amount of visible cream which rises in raw milk and in the same milk pasteurized in the new pasteurizer is shown for 10 different lots in Table 3. These results show a considerable amount of cream in the pasteurized milk. Rather than take cream off pasteurized milk, purchasers are urged to pasteurize cream in the pasteurizer.

The experimental trials reported in Tables 1, 2 and 3 were conducted in the Dairy Technology Laboratories at the University of Illinois by Dr. Ernest O.

TABLE 1

Trial No.	Raw Milk	Pasteurized Milk	Percentage Destroyed
	Numbers of bacteria in 1 cubic centimeter		
1	108,000	70	99.94
2	41,000	90	99.80
3	780,000	1,100	99.90
4	92,000	330	99.60
5	7,200	90	99.10
6	1,200,000	16,000	98.70
7	7,500	310	95.90
8	16,000	450	97.20
9	9,500	500	94.70
10	22,000	950	95.70

TABLE 2

PHOSPHATASE TESTS

Trial No.	Underneath surface of cover	Pouring rim of container	Wall space above milk	Milk[2]
1	0 units	0 units	0 units	1.0 unit
2	0 units	0 units	0 units	1.0 unit
3	0 units	0 units	Less than 1 unit[1]	0 units
4	0 units	0 units	0 units	0 units
5	0 units	0 units	0 units	1 unit
6	0 units	0 units	0 units	1 unit
7	0 units	0 units	0 units	Less than 2 units
8	0 units	0 units	0 units	1 unit
9	0 units	Less than 1 unit[1]	0 units	0 units
10	0 units	0 units	0 units	1 unit

[1] The color was very slightly blue.
[2] Less than 2 units is satisfactory for milk.

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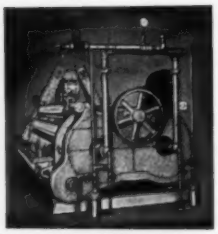

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TABLE 3

Trial No.	Cream Volumes		
	Raw Milk	Pasteurized Milk	Visible Percentage Remaining
	In cubic centimeters		
1	16	12	75
2	15	11	73
3	17	9	53
4	19	11	58
5	20	12	60
6	18	11	61
7	14	10	71
8	15	9	60
9	17	13	76
10	20	14	70

Herreid, Professor of Dairy Technology. These results were obtained with one Safgard Home Milk and Cream Pasteurizer Model P-2000 which was sent to the laboratory by the manufacturer. These results are not an endorsement or a recommendation for the Safgard Pasteurizer by the University of Illinois.

●

Dairy Glossary

A GLOSSARY of Spanish and English terms commonly used in dairy operations – one of the most useful guidebooks of its kind – has just been published by Dairy Industries Society, International (DISI), Washington, D. C.

Prepared by DISI's Committee on Standard Terminology, this handy, pocket-sized volume contains many terms not found in other dictionaries. It was compiled over an extensive period by the patient gathering of word equivalents by committee members and DISI friends in many areas. Inclusion of vernacular and regional Spanish as well as standard Spanish terms greatly enhances the booklet's value. For example, sour cream in Spanish somewhat universally is "crema agria" but in El Salvador it is "mantequilla lavada," and in Costa Rica "natilla."

The glossary is expected to be a great time-saver for producers, exporters, importers, educational leaders, students, consulates and translators.

Included in it also is a concise table of metric system equivalents of particular value in the preparation of commercial and consular invoices.

Blank pages are provided in the booklet for insertion of additional terms as the Society's Committee brings these to light, and informs glossary users of them. Users are requested by the Society to report terms which may be properly added to the present content.

The Glossary was edited by Prof. R. D. Melandez, Scs.Lt.B., A.M., George Washington University, Washington, D. C., a DISA staff member.

Copies may be obtained for a small fee at the Society's headquarters, 1426 G Street, N.W., Washington, D.C., U.S.A.

●

OF EVENTS TO COME

Wisconsin Milk Sanitarians Association—Annual convention to be held at Northland Hotel, Green Bay, Wis., Wednesday, Sept. 7. L. W. Brown, Madison, secretary-treasurer.

Cornell University—Annual dairy industry conference will be held September 8 and 9 at Ithaca, N. Y. Prof. F. V. Kosikowsky, Department of Dairy Industry, Cornell University, Ithaca, N. Y.

Iowa Milk Dealers Association, Inc.—Annual convention will be held at the Hotel Fort Des Moines, Des Moines, Iowa, September 14 to 16, 1949. Secretary, John H. Brockway, 906 Walnut Bldg., Des Moines 9, Iowa.

New York State Association of Milk Sanitarians—Annual conference will be held September 19 to 21 at the Hotel Syracuse, Syracuse, N. Y. Secretary, C. S. Leete, New York State Department of Health, 18 Dove St., Albany 6, N. Y.

National Dairy Cattle Congress—Thirty-seventh annual exposition, including exhibits of dairy products and equipment, will be held at Waterloo, Iowa, October 2 through October 9. Secretary, E. S. Estel, National Dairy Cattle Congress, Waterloo, Iowa.

International Dairy Exposition, Inc. — First annual International Dairy Exposition, including exhibits of dairy cattle, dairy equipment, and dairy product processors will be held October 8 to 15, 1949, at the State Fair Ground, Indianapolis, Ind. Secretary, Robert D. Hammer, Room 633, 130 E. Washington St., Indianapolis, Ind.

Wisconsin Buttermakers and Managers Association—Annual convention to be held at Chippewa Falls, Wis., October 11 and 12. Elmer Radtke, Reedsburg, Wis., executive secretary.

International Association of Milk and Food Sanitarians, Inc.—Thirty-sixth annual convention will be held at the Deschler-Wallick Hotel, Columbus, Ohio, October 20 to 22. Secretary, George A. West, 44 Marshall St., Rochester 2, N. Y.

Milk Industry Foundation — Annual convention will be held at the Ambassador Hotel, Los Angeles, Calif., October 24 to 26. Executive director, B. F. Castle, 1001 Fifteenth St. N. W., Washington 5, D. C.

American Public Health Association—Seventy seventh annual meeting will be held at the Hotels Statler and New Yorker, New York City, October 24-28. Executive secretary, Dr. Reginald M. Atwater, 1790 Broadway, New York City.

New York State Milk Distributors, Inc.—Annual convention will be held at the Mark Twain Hotel, Elmira, N. Y., November 9 and 10. Executive secretary, J. Russel Fox, 74 Chapel St., Albany 7, N. Y.

Dairy Technology Alumni, University of Illinois—Second reunion will be held November 19 at the dairy building, University of Illinois. Executive secretary, Dr. P. H. Tracy, Dairy Manufacturers Bldg., University of Illinois, Urbana.

Dairy Industries Society, International—Third annual meeting has been scheduled to be held in Washington, D. C., during the last week in November. Chairman, Board of Directors, Robert Rosenbaum, 1426 G. St. N.W., Washington, D. C.

Western States Dairy Conference — Annual convention will be held December 1-2-3, 1949 at the Cosmopolitan Hotel, Denver, Colorado. Reservations and information may be obtained from Ammon Bradshaw, Colo. Dairy Products Asso., 415 C of C Bldg., Denver 2, Colo.

Wisconsin Milk Dealers' Association — Annual convention will be held at the Schroeder Hotel in Milwaukee, December 6-8. Secretary, Harry Klueter, 1 W. Main St., Madison, Wis.

Illinois Dairy Products Association — Annual convention will be held at the Morrison Hotel, Chicago, Ill., December 12 to 14, 1949. Secretary, M. G. Van Buskirk, 309 W. Jackson Blvd., Chicago 6, Ill.

●

New Crate

A NEW milk bottle crate for square bottles is being featured by the Milk Bottle Crate Company, 1543 Kingsbury Street, Chicago 22, Illinois. A specially designed "cushion" grid funnels the bottles into position and enables the operator to load from 25% to 30% faster. The manufacturer claims that, while this grid is made of steel, it provides a "cushion" effect while the case is in transit. Severe and exhaustive tests with full bottles under extreme impacted conditions have shown that this grid reduces bottle breakage. Icing costs are also reduced because the grid holds the ice against the bottles and prevents it from falling through the bottom of the crate. Other features of the case are northern hard maple sides reinforced with rust-proofed galvanized steel. Four large hand holes are also provided. Complete information on this new Model 5-12 FCH may be had by writing to the manufacturer.

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FOR SALE — At our Warehouse and Shop we have a good selection of Pasteurizers, Coolers, Bottle Washers, Bottle Fillers, Can Washers, Storage Tanks, Heaters, Separators, Weigh Cans, Filters, Ice Cream Freezers, Homogenizers, Vacuum Pans, Pumps, etc. Save money by considering good Used and Reconditioned Equipment. Write or wire your requirements. Lester Kehoe Machinery Corporation, 1 East 42nd Street, New York 17, N. Y. Telephone—MUrray Hill 2-4616. 9-M

FOR SALE — Lathrop-Paulson 14 CPM Washer including pre-rinser for N. Y. approved use in excellent condition, used daily being replaced by larger machine. Available for inspection and release on arrival of new. Write for price and information, Box 219, care this publication. 9-M

EQUIPMENT FOR SALE

FOR SALE — One G-70 filler equipped with plug and coverite heads, (practically new) $1250.00. One 6 ft. aerator recently retinned, $150.00. One-200 gal. glass lined Pfaudler pasteurizer with recording thermometer, $250.00. One-10 H. P. 3 phase motor, $100.00. One-3 ft. aerator $35.00. All of this equipment is in perfect condition. Reply Elko Dairy, Inc. Roxboro, N. C. 9-M

FOR SALE — 60 gallon pasteurizer in working condition. Reply E. H. Hargrave, Sykesville, Maryland. 9-M

FOR SALE — Boilers; Erie Economic 80 H.P. with smoke stack; 50 H.P. Vertical recently re-tubed. Reply Schuette Bros., Breese, Illinois. 9-M-3

All dairy equipment of small dairy. Went out of business and have storage problem. Buyer to take all. Only $700.00. Write to M. R. Klein, 358 N. Wisconsin St., Berlin, Wisconsin. 9-M

FOR SALE — Completely rebuilt 125 gallon per hour Cherry-Burrell Model 38 Viscolizer. Write D. & M. Farm Dairy, 3428 Spring Garden Avenue, Pittsburgh 12, Pa.9M

FOR SALE — Mojonnier stainless steel, 12 spout Vacuum Filler and Capper, reconditioned and guaranteed; Model 90 RH for one-half pints, pints, quarts, and one half gallons. Will handle up to 90 bottles per minute. Complete with vacuum pump; inlet and outlet conveyer with stands and stainless steel covers; Stainless steel accumulating table with separate drive. PRICED LOW. Also 200, 300 and 500 gallon stainless steel Pasteurizers. Cheese Vats, Sanitary Fittings and Sanitary Pumps. The Filter Paper Company, 2460 S. Michigan Avenue, Chicago 16, Illinois. 9-M

FOR SALE — EQUIPMENT

FOR SALE — Boilers, high and low pressure, new or used, reconditioned and State inspected. Also new or used smoke stacks, breechings, boiler tubes, pumps, motors, pipe, valves and fittings. Otto Biefeld Co., Watertown, Wisc. 9-M

FOR SALE—Sturdy-Bilt Bottle Washer—60 per minute capacity, 4 pocket, round bottles only, plus 12 foot conveyer. Asking $700.00. Rotary Can Washer—R. G. Wright Co. Capacity 6 cans, plus pump and motor. Asking $800.00. Both machines in good condition. Town Talk Dairies, Inc., 1229 E. Fayette St., Syracuse, New York. 9-M

FOR SALE—1,000 Quart cases filled with 56MM round bottles. Cases all in good condition. Bottles washed and placed up side down. Priced for quick sale. 50c per case, including 12 bottles. Sunnybrook Farms Milk Co., 1929 North California Ave., Chicago 47, Illinois. 9-M

HELP WANTED

WANTED—Plant manager. Handling 1,000 gallons day. Pure-pak exclusively, also must know ice cream and mix. At least 10 years experience, strictly sober, dairy school background preferred. Location central South Carolina. Good salary right man, good house. Reply Box 222, care this publication. 9-M

POSITION WANTED

MILK ACCOUNTANT-COMPTROLLER — Twelve and a half years diversified accounting experience in the dairy industry; butterfat and financial accounting; Thorough knowledge of government regulations. Salary, $10,000. Reply Box 216, care this publication. 9-M

POSITION WANTED—College graduate desiring to learn the retail milk plant business with the purpose of eventually buying from present owner. I am able to move at once anywhere in the United States. Write F. W. Miller, 25 Union Street, Lebanon, N. H. 9-M

FOR SALE — MISCELLANEOUS

FOR SALE — Truck lettering and trade mark decals, made for your truck and store advertising. Easy to apply; uniform, distinctive, economical for small or large needs. Write for catalog. Mathews Co., 827 So. Harvey, Oak Park, Illinois. 9-M

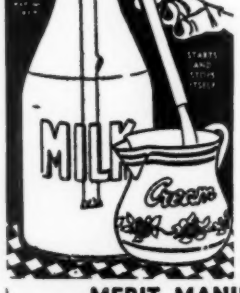
FOR SALE — Divco Floor Mats $7.25 per set, f.o.b. Buffalo. Satisfaction guaranteed, state year, Iroquois Mat Co., Swan Street, Buffalo 10, N. Y. 9-M-3

Sales Service for Manufacturers of

MILK PRODUCTS

Evaporated Milk—Powdered Skim Milk — Powdered Buttermilk — Condensed Skim and Whole Milk — Powdered Whole Milk.

C. W. BURCKHALTER, Inc.
156 Franklin St. New York, N. Y.
WAlker 5-0727



AN EFFECTIVE BUSINESS BUILDER

Useful — Interesting

MAGIC CREAM SIPHONS for home use, remove cream from bottled milk to use with coffee, cereals and desserts.

PLEASE OLD CUSTOMERS — WIN NEW ONES

Leading dairy firms find Magic Cream Siphons a welcome sale booster aid. Homes using a cream siphon consume more milk when they learn how many foods are improved by the liberal use of milk instead of water in preparing.

Free sample for round or square bottles
Glass $15.00 per gross or $100.00 per 1000
Aluminum $17.50 per gross or $115.00 per 1000

Complete Satisfaction Guaranteed

MERIT MANUFACTURING COMPANY
3455 EAST 150TH STREET CLEVELAND 20, OHIO

FOR SALE — MISCELLANEOUS

REBUILT — Pasteurizers, Milk Coolers, Bottle Fillers, Ice Machines, Plate Coolers and Heaters, Homogenizers and Bottle Washers. Send us your requirements. Ohio Creamery Supply Company, 701 Woodland Ave., Cleveland 15, Ohio. 9-M-t.f.

FOR SALE—Orange-Ade Base made from fresh oranges. Nothing to add but water, $1.35 per No. 10 tin. Bradway Chocolate Company, New Castle, Indiana. 9-M-t.f.

FOR SALE — Chocolate Powder and Chocolate Syrup for making Non-Settling Chocolate Milk. Your trial order will receive our prompt attention. Bradway Chocolate Company, New Castle, Indiana. 9-M-t.f.

BUSINESS OPPORTUNITY

FOR SALE — Country plant in Pennsylvania — approved for New Jersey and Newark. For particulars write Box 220, care this publication. 9-M-3

FOR SALE — Yearly basis to responsible party large volume fluid skimmilk daily available for manufacturing into cheese. If interested write Box 218, care this publication and meeting for discussion can be arranged. 9-M

FOR SALE — In Wisconsin college town, Milk & Ice Cream plant, 6 retail milk routes, one Ice Cream route; Dairy Bar at plant, good buildings & equipment; most of it new last two years; 5 trucks '47 & '49 models; room for expansion; excellent reputation, a well kept up plant, in and outside; some terms can be arranged. Price $52,000 for everything, will sell without buildings for $35,000 plus $175.00 per month rent on 5 year lease. Reply Box 217, care this publication. 9-M

FOR SALE—Established Dairy Business, 100% location in the fastest growing towns in South Carolina 20,000 Pop. Retail routes Ice Cream bar, doing nice volume, new building. Death of partner reason for selling. Write Box 221 care this publication. 9-M

WANTED TO BUY

WANTED — One of our clients wants to buy a good going milk plant or cheese factory located in Illinois or Iowa. For full particulars write to Otto Biefeld Co., Watertown, Wisc. 9-M

REPAIR SERVICE

THERMOMETERS — We repair Mercurial Indicating Thermometers, dial thermometers and recording thermometers of all makes. Instruments are reconditioned like new. Satisfaction guaranteed. For economical savings ship your thermometers to Nurnberg Thermometer Co., 124 Livingston St., Brooklyn, New York. 9-M-3

●

INSTRUMENT COURSE

The Fischer & Porter Company announces a number of vacancies for its next instrumentation course to be held at the Hatboro, Penna. plant, October 10 through 14, 1949.

The course will cover manufacture, calibration, installation, operation and maintenance of the Company's complete line of "FLOWRATOR" primary and secondary process control instruments. (Some time is also devoted to the basic principles of variable-area flow measurement.) It is designed for engineers.

DISA IN STAND-BY ROLE

Collegiate Judging Contest Is Supply Association Feature During Convention Week at L. A.

For Dairy Industries Supply Association (DISA) members October 24-30 will be a stand-by week in Los Angeles. A Dairy Industries Exposition not being scheduled the members of the suppliers' and equippers' large group will concentrate on renewing contacts with convening customer associations' members and on holding limited business sessions.

DISA's Los Angeles activity that will have whole-industry interest will be the staging, in conjunction with American Dairy Science Association (ADSA), of the Collegiate Students International Contest in Judging Dairy Products. This has been scheduled for Sunday, October 23, the day before the opening of the Milk Industry Foundation (MIF) sessions. The Awards Dinner, on Monday evening, October 24 will be under the joint auspices of MIF, ADSA and DISA. The International Association of Ice Cream Manufacturers will start its convention on Thursday, rounding out the annual Dairy Industries Week.

Headquarters for the Supply Association will be in the Alexandria Hotel, with three other downtown Los Angeles hotels and a number in Hollywood also earmarked for its members' use. These other hotels are: in L. A. proper, the Clark, Hayward and Rosslyn; and further out, the Hollywood Knickerbocker, Hollywood Plaza, Hollywood Colonial, Hollywood Roosevelt and Hollywood Drake. Headquarters, as announced for the two large convention groups by them earlier, are, for MIF, the Ambassador, and for IAICM, the Biltmore.

Although plans for DISA's own work sessions within the week have not been completed, it is expected that on Monday afternoon there will be a general membership session for all representatives of DISA firms, outlining activities for the week and affording members a preview of DISA slidefilms now in preparation and a fill-in on the Collegiate Judging Contest and its relationship to the dairy industries as a whole.

An afternoon session later in the week of especial appeal to various department heads as well as to general executives of member companies will, it is expected, be devoted to marketing data matters.

The nucleus of a DISA-in-Los-Angeles Committee has been selected by DISA's President, R. E. Olson and will shortly select its chairman and, it is anticipated, organize further in to sub-committees. DISA plans to announce the make-up and activities of the committee shortly.

CLEAN TUBES SCALE

(Continued from Page 50)

blower on top of the tube bank and blow down between the tubes. The soot is thus cleaned off from one side of the boiler to the other in a workmanlike manner, and instead of having the jets blow the soot against the wall it is blown downward into the clear space below the tubes. It is impossible, in designs of this kind, for the tubes to become clogged full of soot. Scale formation, also will be uniform from side to side. It has been pointed out that during the scaling process some of the workmen "think" that the scale is thicker on one side than the other. The thickness, it is said, varies directly with the tiredness of the man. There may be some truth in this alleged belief by workmen, but it nevertheless does not alter the facts stated above.

And, lastly, it has also been said that much depends upon the way in which the fireman shovels coal into the furnace —if it is a hand-stoked boiler. If the man is left-handed, he may throw more coal to one side than to the other, and thus keep one side of the boiler hotter. There may be some truth to that, too, but the fact remains that the tubes that evaporate the most water or absorb the most heat are the ones that will accumulate the thickest scale in the shortest time.

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ADA ADVERTISING PROGRAM

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gives a lift to people in their older years, provides calcium needed to prevent easily broken bones and helps lengthen life. Another ADA research project at the University of Minnesota disproved the belief that milk contributes to hardening of the arteries. It demonstrated that the cholesterol found in milk bears no relationship to this disease.

Tribute was paid to the leadership and service of Dr. Robert Prior, Seattle, Washington, long-time chairman of the ADA research committee. His asociates of the executive and advisory groups presented him with tokens symbolic of state and regional membership of the ADA from coast to coast.

Announced at the executive session was a tentative proposal by the U. S. Department of Agriculture to devote $80,000 of Hope-Flanagan funds to a consumer study on dairy foods at the market places. Financed by U.S.D.A. the project would be under the joint guidance and sponsorship of the ADA, the Super-Market Institute, the chain and independent store group.

Babcock Sounds Keynote

At the dairy industry banquet, leaders from Utah and all parts of the nation heard Dr. H. E. Babcock, Ithaca, New York, sound the nation's agricultural keynote which echoed across the country calling for a strong animal agriculture keyed to: (1) Protect the nation's prosperity; (2) Build soil productivity; (3) Furnish Americans with the kinds of food they need and like most, and, (4) Provide a solution for the nation's surplus grain problem.

Babcock warned that the population ratio of man to livestock is reaching a dangerously low point. His picture of the "unimal" as a combination animal symbolic of meat, milk and egg-production brought a striking realization of the vital role played by dairying in the economic life of the nation.

Dovetailing into the animal agriculture theme was the informative report given by W. S. Moscrip, Minnesota executive committeeman, concerning his recent inspection trip to foot-and-mouth disease areas in Mexico. As a member of the 10-man federal commission on the Mexican mission, Moscrip said the vaccination and sanitation warfare directed by U. S. officials must be enforced until the battle is won. Spread of the disease across the border, he warned, would be a major disaster to this nation's livestock industry.

Utah Hosts Praised

Rallying the dairy forces of the West solidly behind the ADA movement, the Utah Dairy Federation was an ideal host to this "meeting of minds" as the ADA embarked on its tenth year of business accomplishment for dairy farmers of the nation and their industry. Sparking the arrangements and heading the welcome committee for the western rally were Merrill N. Warnick, Pleasant Grove, president and Professor A. J. Morris, Logan, managing director.

In appraising the advertising, merchandising and research campaign as mapped out by the executive group, Bryce S. Landt, president of the Association, pronounced it as the best balanced market-building undertaking ever launched on an industrywide basis. He pointed out that the business urge to keep dairying in the forefront of forces advancing a prosperous national economy will pay dividends to all branches of the industry.

Have You Seen The Want Ads?

IT HAS EVERYTHING!

This New Stainless Steel Sanitary Pipe Cleaning Equipment at an Amazingly Low Price!

$299

FOR 10 FT. STAINLESS STEEL TANK ONLY, WITH SPUN PIPE LEGS.

GIRTON Sanitary Equipment — GIRTON MFG. CO.

NEED RACKS?
Neoprene covered removable racks. Buy as many as you need.
EACH **$9.50**

NEED A SHELF?
Stainless Steel removable shelf.
$30.00

NEED A PIPE CLEANING MACHINE?
½ HP Standard motor. Can be mounted on any tank.
$237.50

NEED MOBILITY?
Ball Bearing swivel casters available.
PER SET **$11.75**

NEED THE TANK ONLY?
Tank is all stainless steel with zinc sprayed legs.
$299.00

NEED TO CUT LABOR COSTS?
This modern efficient pipe cleaning equipment will save you money every day!

• This new GIRTON SANITARY PIPE CLEANING EQUIPMENT was designed to fit your plant. You can select any part that you need, from the tank alone to the complete outfit shown above. Buy only what you need to provide the equipment your own plant requires.

WRITE FOR BULLETIN

GIRTON MANUFACTURING COMPANY
MILLVILLE, PENNA.

New! **Seven-Valve Filler-Capper for Medium-Size Dairies!**

"72" THE MILWAUKEE

Gravity or Vacuum Type with features found only in fillers selling for twice its low price!

Here's another new trendmaker by Cherry-Burrell — the Milwaukee 72 Filler, developed to bring to small and medium-size dairies the same advantages of superior sanitation, smooth, waste-free filling and accurate capping formerly available in only the larger, more expensive fillers. The "72" is available as either a gravity or vacuum type filler; it handles all standard sizes of round or square bottles, including rectangular two-quart and conical paper bottles. Look at these big filler features:

1. **Improved Sanitation:** Open design features rounded, free-draining contours. Stainless steel bowl and valves.
2. **"Clean Bowl" design:** An exclusive feature made possible through the use of Cherry-Burrell's patented diaphragm type valve. The most sanitary filler bowl made!
3. **Positive infeed:** Patented mechanism for trouble-free operation with all standard bottle sizes and shapes, round, square or rectangular.
4. **Quickly interchangeable cappers:** To handle a wide variety of cover and disc cap sizes and types.
5. **Hand or conveyor infeed and discharge:** Hand infeed model can be easily converted to conveyor infeed and discharge.

Gravity type Model G-72 Filler (above). Vacuum type GV-72 Filler (left). Speed range is 20 to 50 bottles per minute. Handles quarts at 35-40 bottles per minute depending on product conditions.

Send now for details on the new Milwaukee 72 Filler! Use this coupon.

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FACTORIES, WAREHOUSES, BRANCHES, OFFICES, OR DISTRIBUTORS AT YOUR SERVICE IN 56 CITIES

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☐ Send bulletin on the Milwaukee 72 Filler
☐ Have a representative call

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Firm Name.....

Address .....

City..... State.....

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